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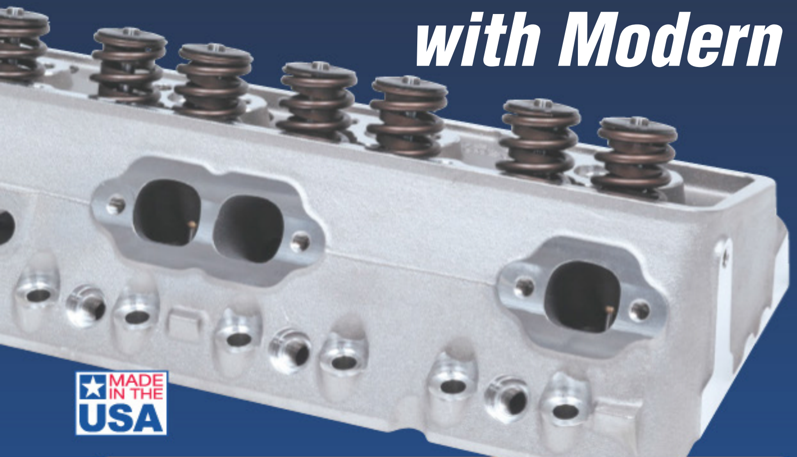

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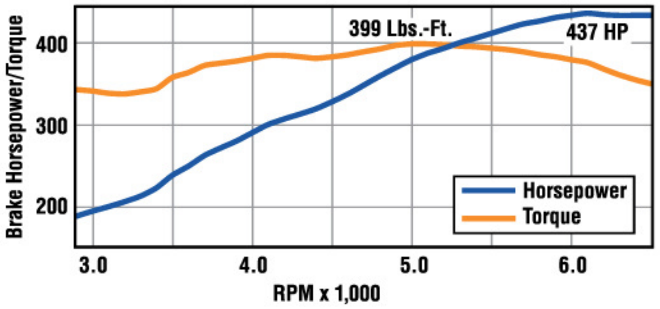
Dyno Results
DHC 175



Test Engine: 10.2:1 compression 350 c.i.d. with Trick Flow DHC™ 175 cylinder heads (TFS-30210003), Trick Flow Track Max™ hydraulic roller camshaft (TFS-31402001), 1.6 ratio roller rocker arms, Trick Flow chromoly pushrods, Edelbrock Victor Jr. intake manifold, 750 cfm carburetor, Hooker Super Competition headers with 1¾" primaries, 3" dual exhaust with Flowmaster mufflers.

Airflow Results
DHC 175

Lift Value	Intake Flow CFM	Exhaust Flow CFM
.100"	65	53
.200"	133	104
.300"	192	136
.400"	233	180
.500"	258	198
.600"	254	207

Tests conducted at 28" of water (pressure).
Bore size: 4.030"; exhaust with 1¾" pipe.

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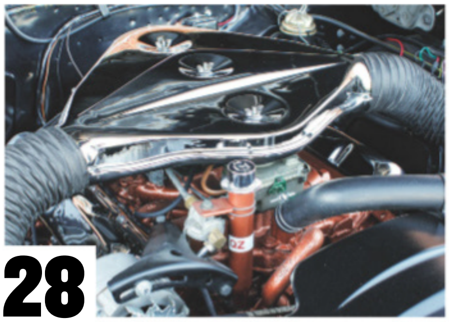

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SPOTLIGHT: Buick-Olds-Pontiac (B-O-P)

ON THE COVER: Bob Bachman was fortunate enough to get his first car back, and Scotty Lachenauer captured the '69 GTO in flight in central Pennsylvania.

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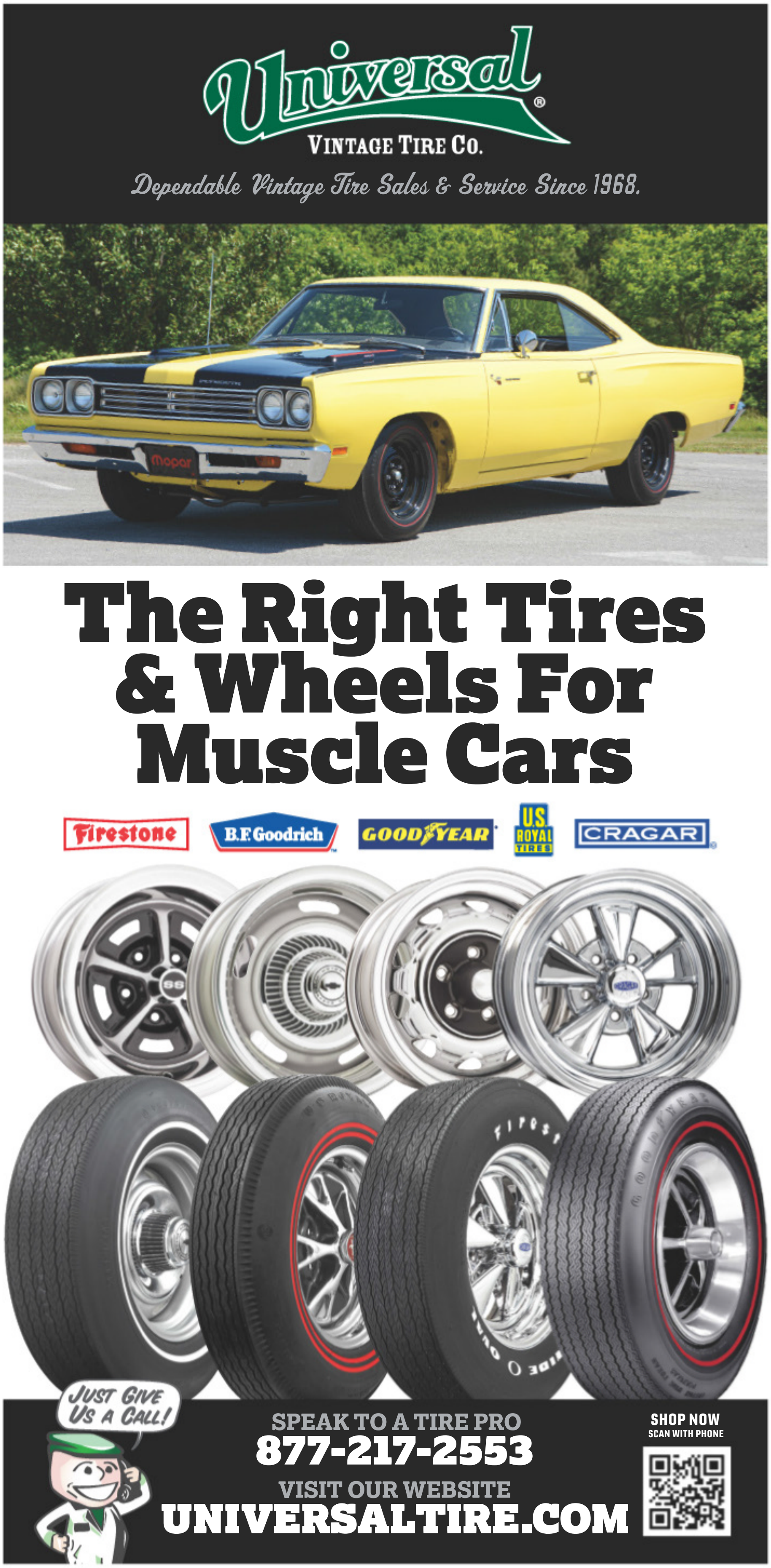
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ISSN# 1550-0691 • www.hemmings.com
Published monthly by Hemmings • 222 Main St., Bennington, VT 05201

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Subscription rates in the US and Possessions; 12 issues for $19.95. Canada $30.95; (CDN price includes surface mail and GST tax). All other countries $32.95 in US funds.

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TERRY McGEAN
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Seeking the Ultimate

A few of the cars and owners we're highlighting in this issue got me to thinking about the concept of the "ultimate" car. In this case, ultimate would be used to mean the owner's idea of the most perfect iteration of his or her chosen model. We car enthusiasts tend to find certain vehicles to really connect with, and from there it seems a natural progression to start thinking about the best version that can be imagined—and *then* possibly setting out to make it real. The owners of some of our feature cars all appeared to be motivated by that drive in one way or another, and I think it's a mindset many of us can understand.

> We car enthusiasts tend to find certain vehicles to really connect with...

Though I'm confident this sort of thing is likely to have started shortly after the first production automobile was offered for sale, when I ponder the origins of these efforts, I'm more apt to think of the hot rodders of the postwar period. Modified cars were being built by gearheads long before World War II, but the proliferation of more advanced automotive technology afterwards seemed to really excite those efforts, particularly the new "overhead" V-8 engines coming from Detroit as the 1950s were dawning.

Detroit kept it up and, by the late '50s, was already trying to show performance enthusiasts that they didn't need to build their own cars from gathered-up parts—they could just select the hardware they wanted from the factory order sheet. The muscle car era took this practice to new heights, but of course, hot rodders are rarely satiated in their quest for more power, so engine swapping continued, only now often enabled by the dealership's parts counter.

Once the automakers had to rein it in and turn off the horsepower spigot for showroom offerings as the '70s unfolded, the parts counters continued to help, but more creativity was often needed to make old and new work together. The years rolled on and newer, better hardware became available, and here again, the gearheads wanted to bring the best elements together for that ultimate car.

In this month's issue, we have a story on a '66 Olds that was created to represent one person's idea of the most drag-strip lethal 4-4-2 the factory might have built that year, though it was assembled decades after that model year ended production, pulling together parts from a variety of sources. In this instance, the expression of ultimate had to do with merging the hottest factory equipment with the most stripped-down version of the host vehicle. Interestingly, this owner had originally set out to build a full-blown restomod using a driveline from one of today's top performers combined with modern chassis and braking upgrades to match. Along the way, his definition of ultimate shifted.

In another story, a GTO owner creates a modern interpretation of that vaunted model, utilizing a variety of contemporary aftermarket upgrades not available back when he was first wrenching as a teen in the '70s. We also have the account of a '78 Dodge ordered new by a performance enthusiast who got to the dealership a few years too late. He wended his way through the order sheet to make the best of what was available, and then blended some classic Mopar bits to make it even better.

In all cases, these owners were seeking to possess something beyond the standard for their respective cars, whether that meant selecting obscure options from the factory or adding elements the original automaker never offered. None of these cars came together accidentally—each one was envisioned before any action was taken. Each was the outcome of that particular sort of daydreaming so many of us are prone to do.

I can recall those kinds of thoughts running through my head while I sat in class in junior high school, not yet old enough to drive. That didn't hinder me from fantasizing about things like Chargers with Hemi engines and Pistol Grip four-speeds riding on whatever mag wheels had most recently caught my eye while poring over the pages of *Hot Rod* or *Car Craft* magazines. I'd wonder if things like the brakes and suspension from a later-model Monaco police car would fit under that Charger, or if the high-back buckets from a 'Cuda or a tilt column from a Cordoba could be transplanted.

Without an internet back then, those answers were much harder to come by, but I continued to ponder a broad variety of theoretical project cars in my mind, and then started attempting it for real when I finally got my hands on a car.

All these years later, my like-minded friends and I are still just as entertained and motivated by these quests, and still apt to get into a giddy discussion about some theoretical build over lunch or an after-work beer. And those feature cars in this issue serve as just a sprinkling of the proof that exists to show we're not alone in these fascinations. ■

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GM MEDIA

SEVENTY YEARS ON

CHEVROLET'S CORVETTE CELEBRATES ANOTHER ANNIVERSARY

Hey, the Corvette is mid-engined now. Didja hear about it? Yeah, it's been four years. The time, how she flies. Is that long enough to call a mid-engined Corvette "traditional?" Well, now that the shock of Chevrolet actually designing a mid-engined Corvette and foisting it upon the masses is no longer a new feeling (for most of us, anyway), it's time to get down to normal Corvette business. You might imagine that this would involve discussing things like power figures, quarter-mile times, and lateral-G numbers around a skidpad. Slide-rule comparisons between Corvette cost-and-performance versus the European competition's. Eternal hand-wringing over the lack of a manual transmission. Heavens no. Chevy's 70th Anniversary Special edition Corvette is here. *What's in it?*

The usual trim spiffs, mostly: specific dark-finish wheels for each model, with commemorative center caps (Stingray and Z06 models will use different wheel designs); special anniversary exterior badging, plus the logo appearing on the seats, steering wheel, sill plates, trunk cover, and rear bumper protector, in case you ever forget what you're driving; a custom luggage set with red stitching and — wait for it — the anniversary logo; red brake calipers; and (on coupes) a red engine cover — the convertibles' engine cover remains a metal plate that prohibits viewing of the V-8. There are also red seatbelts, red stitching throughout the interior, and your choice of two-tone Ceramic leather GT2 or available Competition Sport seats. The seats and steering wheel also come with sueded microfiber inserts.

Corvettes haven't ever really required extra power to sell better — even as far back as 1978 with the dueling specters of the black-and-silver Indy Pace Car and the silver-and-grey anniversary edition, at a time when they could have used some extra power. The '23 models don't get additional power, either, but mercifully the Corvette is already plenty fast on its own.

You can get the 70th Anniversary Special Edition package on coupes or hard top convertibles, Stingray, or Z06 models, and in a choice of White Pearl Metallic Tri-coat or Carbon Flash Metallic. Complementary-color stripes (gray on white cars and satin black on Carbon Flash cars) are optional. Years from now Corvette scholars will plot a matrix and figure out the relative rarity of a white Stingray coupe with GT2 seats and stripes versus a Carbon Flash Z06 convertible with Competition seating and no stripes, and all of the permutations therein. Could someone order Z06 wheels on a Stingray? Could Satin Black stripes appear on a White Pearl Metallic Tri-coat model if so ordered? We look forward to seeing these combos play out.

The package is $5,995 on top of however you spec out the rest of your new Corvette. A white convertible with red interior highlights, mandatory automatic transmission, and a roof that goes down all make a nice way to close the loop with the original '53 version. ■

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2023 Canada Maple Leaf: A highly sought-after bullion coin since 1988, this 2023 issue includes the **FIRST** and likely only use of a transitional portrait, of the late Queen Elizabeth II. These are also expected to be the **LAST** Maple Leafs to bear Her Majesty's effigy. Struck in high-purity 99.99% fine silver at the Royal Canadian Mint.

2023 South African Krugerrand: The Krugerrand continues to be the best-known, most respected numismatic coin brand in the world. 2023 is the Silver Krugerrand's 6th year of issue. Struck in 99.9% fine silver at the South African Mint.

2023 China Silver Panda: 2023 is the 40th anniversary of the first silver Panda coin, issued in 1983. China Pandas are noted for their heart-warming one-year-only designs. Struck in 99.9% fine silver at the China Mint.

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Letter of the Month: **Collecting Keepers**

Reading Terry McGean's editorial "Shifting Standards" (*HMM* #233, January 2023) and "Restoration Education" in the January issue of your sister pub, *Hemmings Classic Car,* really brought back memories of my early interest in cars that began when I purchased my first car in 1968: a '64 Falcon Sprint hardtop for $500 (I still have it). After taking it to a service station for some engine issues that were not resolved, it became apparent to me that in order to keep a car on the road, I would need to learn how to do the maintenance work myself.

And learn I did. Over the next two decades I bought more than 65 cars, most for less than $500; did mechanical work, body and paint work, and then resold them to afford my next project. As the years passed and more equipment became affordable, fixing rust holes with tin, pop rivets, and Bondo was replaced with MIG welding and replacement panels. I learned to rebuild engines, reupholster seats, replace headliners, apply and buff out paint, and do every aspect of a full restoration. Every so often I would complete a car and not be able to part with it because it looked so nice and because I "always wanted one like that." Over the years the number of "keepers" grew; I now have a small collection.

Since I retired, I have completely restored a 1966 Mustang convertible that I had not driven for more than 15 years and a 1969 AMC AMX that had been in the corner of my garage for 30 years. These restorations were made easier with the help of a rotisserie and much needed replacement sheetmetal. I have also gone back and improved most of my cars as more parts became available and my restoration standards improved. As a reflection of what these keepers cost back in the day, I purchased a '55 T-Bird in 1971 for $300, the '66 Mustang convertible in 1976 for $425, '70 Mustang Mach 1 in 1975 for $1,600 (a survivor), '69 Mercury Cyclone Spoiler II in 1979 for $250, '67 Mustang fastback in 1981 for $650, and a '68 Mustang fastback in 1982 for $350. Today you couldn't buy a replacement fender for those prices!

Living in Wisconsin with all the road salt and rough winters, I guess you can say I did bring these cars "back from the brink," because at the time of purchase, many would have been driven as beaters, scrapped, or turned into parts cars at best!

Guy Grube
Via email

TALES OF REDISCOVERY, MARINE EDITION

As I read Terry McGean's column "Tales of Rediscovery" (*HMM* #234), it made me want to add a perspective on your "one that got away" story.

I have spent an inordinate amount of time and money over the years on stuff of all types. Mostly cars, more specifically Corvettes. But it took one specific purchase that was rediscovered to add a perspective not before realized.

I think most men are born with a genome that says, "You must have, at some time in your life, a pickup truck, a motorcycle, and a Corvette." In my case I wasn't told it had to happen concurrently, nor did I need to keep them once acquired!

In any case, a variant of that genome also led me to dune buggies, and a transition to boats seemed natural. Over the course of the next five years I had seven boats — the last of those was an "offshore" style with twin big-block Chevys that put goosebumps on a car guy from the first moment the key was twisted on engine #1. I called this dream *"Delirious,"* and it quickly became ingrained in my DNA.

The downside was it cost $67,000 in 1968 money (about $165,000 today), and after just three summers, it caused a bit of financial stress! I remember vividly watching it roll away on the custom Eagle trailer and into another guy's dream. Nothing else that left my life — no truck, motorcycle, Corvette — caused more stress.

Several years later, with a more developed income, I began to look for my *"Delirious."* The boat had disappeared, along with its second owner. Searching for more than 25 years turned into just an unfulfilled whim, an itch never to be relieved.

In late fall a couple years ago, perusing Craigslist, a "lookalike" hull popped up on the screen. I remember thinking, "Dang, if that thing had the name *Delirious* on the side, it could be my long-lost fantasy." Another pic had it sitting on an Eagle trailer. As I got closer, I noticed it had no ski-tow eye (I had deleted it), the throttle and shift controls had been reversed as I had done, and it was teal/white gelcoat, which had taken a special order.

As I frantically dialed, I was digging through old pics to see if I could find one with the hull number. The guy had owned the boat for 10 years, had bought it from the second owner after 20, and it had been stored in a marina just across the river from the marina I had kept it at in 1968! He said it used to have the name *"Delirious"* on it, but he had it removed. The boat also had only 310 hours.

Of course, that magnificent dream now resides in climate-controlled storage (as it had for 30 years), now with my name back on the title. People ask how long I have had it and I cheat a little by saying something like, “Oh, I ordered this thing new in ’68.”

However, all that is to say that the “additional perspective” is that although the dream has not changed, and neither has the boat, the thrill of owning it is now intact. However… I am no longer the brash young guy at the top of his game, who flew 70 mph across Lake Michigan without a compass as the depth gauge read 800 feet and a Corvette awaited back at the dock.

Soon after buying it back, I began my first trip out the channel to the big lake, wondering where I would get new *“Delirious”* decals, drowning in the open exhaust sounds coming out from under the swim platform, and waiting to get out of the no-wake zone and unleash the power. Just then, a whole ’nother set of thoughts (perspectives) began to set in. Silly stuff — grown-up stuff… even scary stuff, like how do I know this old compass and ship-to-shore radio still work? How far out will my cell reach? Should I crank up 1,000 hp on this 30-year-old transom? And even, just where the hell am I going on this little maiden voyage?

After a *short*, throttle-controlled, wonderful journey where all the emotions from a long-lost time were renewed and answered, I realized that this wasn’t a return to the *Delirious* dream of yesterday, it was the fulfilment of a broken and unrequited one that was now mended. The interrupted saga of “the one that got away” was now repaired. And no matter what I did now with this wonderful boat and part of my life, that huge emotional void had been corrected. It’s a whole new set of unexpected emotions that I had never experienced or considered in my quest to retrieve this dream.

It’s just a personal, kinda sappy perspective that now allows me to just own that dream (and my now nameless) *Delirious* — satisfied that she is back where we both belong for the duration.

Bud Meyers
Grand Blanc, Michigan

BIZ MEMORIES

I also owned a ’68 Chevrolet Biscayne 427/425-hp two-door sedan (“A Deeper Dive,” *HMM* #234), and mine also had an M-22 “rock-crusher” four-speed and a 4.56 12-bolt rear. Mine had four-wheel drum brakes, tinted windows, heavy-duty cooling, the wood steering wheel, F41 suspension, and auxiliary lighting. The original owner worked at the Janesville, Wisconsin, assembly plant and ordered it this way.

Back in 1973/’74, I could have bought that car as-is for $800. The engine and transmission were sold separately. I tried to find both but no luck. I put a 427 and a M-22 back into it, though they do not have the correct casting numbers or date codes.

I sold the car back in 1989. Kick me for selling it. I would be interested in getting that car back if the price was right.

Great magazine — keep it up.

Richard Olsen
Oshkosh, Wisconsin

HOMETOWN HEROES

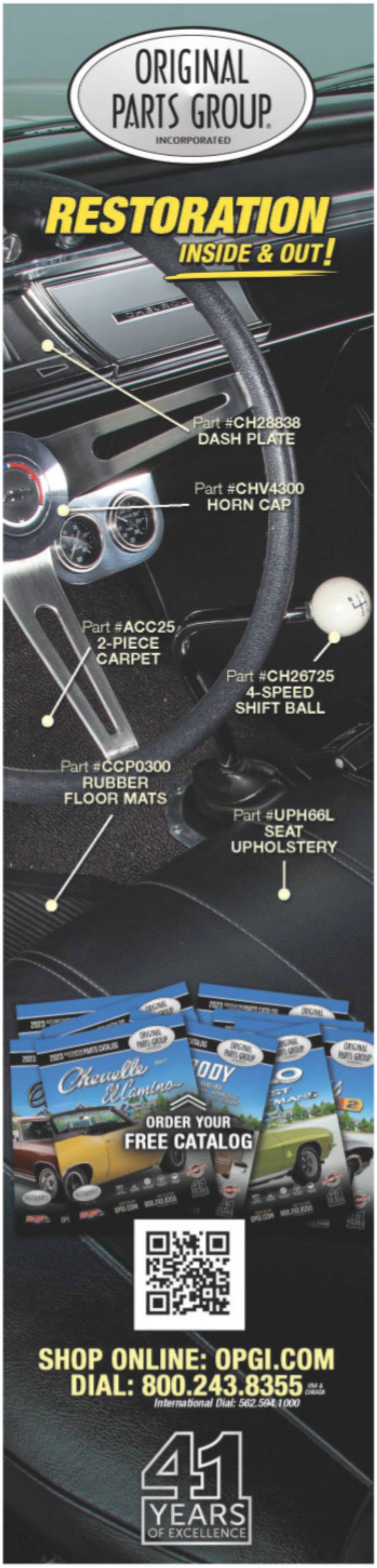
When I was living in northeast Pennsylvania, I became good friends with Ed Almquist, of Almquist Engineering and later Sparkomatic. As mentioned in John Agan’s letter, Ed was a pioneer in hot rod history and mail order sales. When he died, I let *Hemmings* know, but you never acknowledged him. For shame!

The second letter was Robert Palmer’s. He mentioned [automotive historian] Beverly Rae Kimes. I used to visit her husband’s restoration shop, Sussex Coach, up the street. Often some vehicle would come down the road and I would go to the shop to check it out. I was always welcome. One day he asked me if I knew who Beverly was. Of course, I did. He invited me to come in the next day to meet her. I went, but no Beverly. She was home, taking a sick day.

As an aside, my wife, Regina, ordered me something for Christmas and the subscription mailing label is now in her name. With the last renewal I asked for it to revert to me. It didn’t. She lets me read it though.

Peter Moore
North Wales, Pennsylvania

We did acknowledge Ed Almquist’s passing back in 2015 with an online news article in the Hemmings Daily — you should be able to find it easily with a quick search. When former HMM *editor George Mattar was growing up in Pennsylvania, Ed Almquist was his neighbor. George told interesting stories about stuff Almquist would be working on in his home workshop.* ■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ROUND TWO

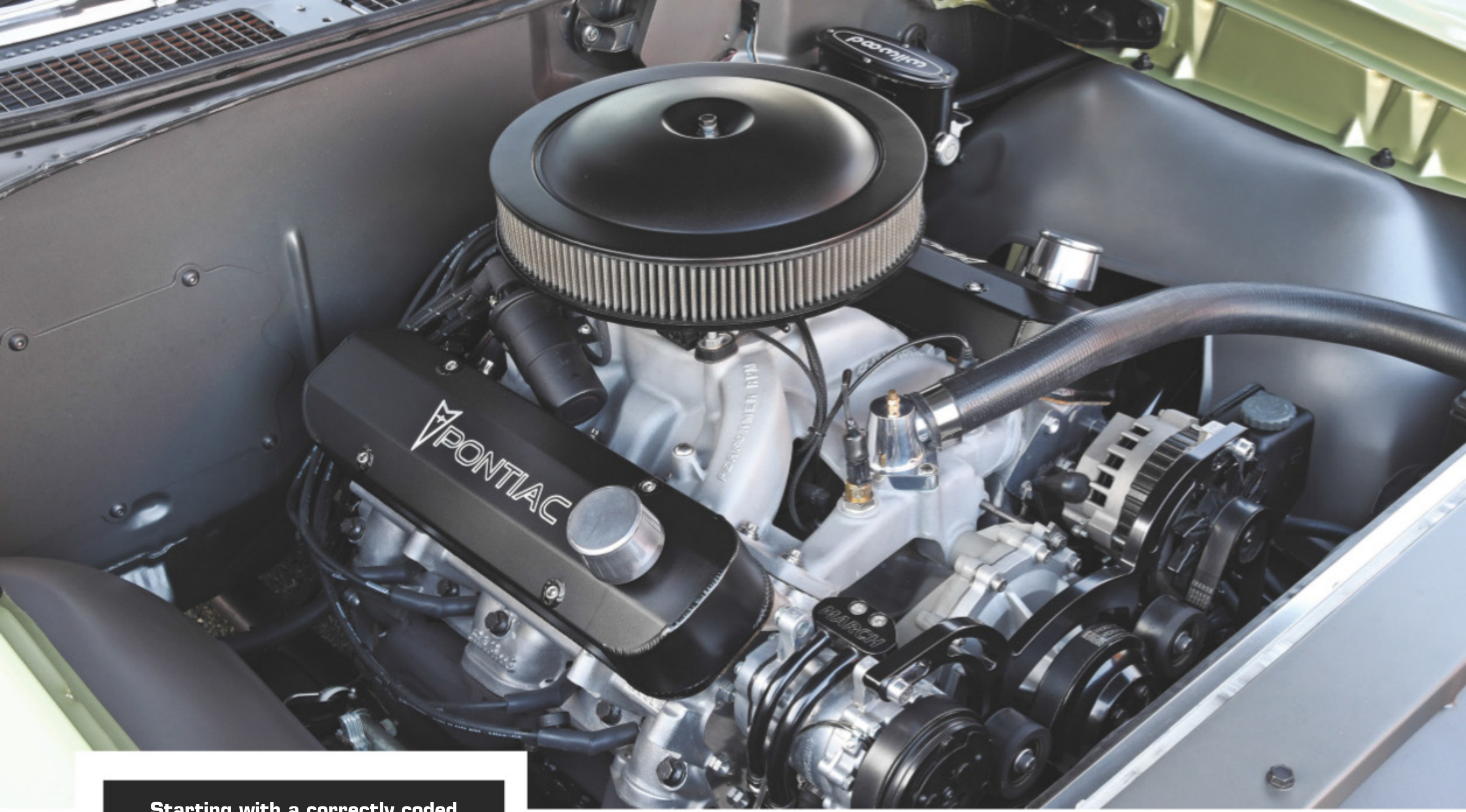
A GTO ENTHUSIAST GETS A SECOND CHANCE WITH HIS FIRST LOVE

WORDS AND PHOTOGRAPHY BY SCOTTY LACHENAUER

BOB BACHMAN'S INFATUATION WITH PONTIACS, and more specifically, GTOs, started when he was a youngster called upon to work on weekends. While most kids look to avoid work when they're not in school, Bob didn't mind his "job" at all.

"When I was a kid, I would spend my Saturday mornings doing something I loved," Bob explains. "Those days were spent with my grandfather, who had a very important job as far as I was concerned. He was a salesman at Jones Pontiac in nearby Lancaster, Pennsylvania, our local Pontiac dealer. He would bring me in and let me tag along, following his every move as he did his job. I loved hanging out with him and of course, getting to check out the finest cars in the world. I was in heaven."

Some of Bob's fondest memories from his stint at the dealership were from that time of year when the new models were rolled out by Pontiac. "Remember all the hoopla the manufacturers would conjure up for the year's new offerings? The roof of the dealership [where we worked] was flat, so they used to hide the new models up there before the public was



Starting with a correctly coded '70 400 block, owner Bob Bachman had it over-bored .030-inch and assembled with Edelbrock aluminum heads and intake, a Lunati roller cam, and FiTech EFI.

able to see them. I remember it was such a treat when Grandpa would unlock the ramp gate so we could go up on the roof to check out the new Pontiacs!"

There was a particular new model rollout that really stood out in Bob's Pontiac memories. "I vividly remember the day the 1964 GTO came out at the dealership. It really blew my 9-year-old mind. Right then and there I knew someday I would have a GTO of my very own. It was a lofty life goal for young kid like me, but somehow, I just knew it was going to happen."

From those early days "working" the Pontiac sales floor, to the present day, the Strasburg, Pennsylvania, native has kept a profound loyalty to his favorite marque. "I've been a Pontiac guy since day one. It was our family brand, as most of my relatives drove them. It was something that surrounded me, and it really rubbed off."

The tale of how Bob scored his first car starts as many such stories do, with the young car aficionado saving his money and slowly working his way to the targeted purchase. "I had a paper route, and I stashed all my hard-earned money to buy my first ride. I was 16 years old at the time and I knew a car would give me newfound freedom to roam and discover on my own. I found a nice '67 Le Mans for sale and decided that would be a good starting point. No, it wasn't a GTO, but hey, it was a move in the right direction."

Bob drove the Le Mans for a year. It served the high-schooler well, as it was both dependable and a solid ride. However, something would soon catch his eye that would change the relationship between himself and his machine. "I drove by Jones Pontiac one day; my grandfather had long since passed by that point. Out in the lot was a stunning '69 GTO, basted in Limelight Green Metallic. I mean, this thing just popped in the sunlight. It was love at first sight."

A closer inspection revealed some more interesting highlights. It turned out to be a 22,000-mile, one-owner car, built with the standard 400-cu.in. engine backed by a Muncie four-speed transmission. Other options included power steering, AM radio, vinyl top, and the hideaway headlamps. It also wore stock tires with standard steel wheels and hubcaps. "I wound up

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trading in my trusty Le Mans to purchase my dream GTO on May 22, 1973. I couldn't drive stick yet, so my dad drove it home from the dealership."

Once back at the family home, it didn't take long for Bob to start making changes to his new purchase. "I did all the typical 'Day Two' mods that were all the rage back then. First, I installed a set of Ansen slot mags with L60 tires out back, along with some Gabriel Hijacker air shocks. I painted the brake drums silver, and then mounted a Hurst T-handle shifter between the buckets. Next, I added an Edelbrock intake, Holley carburetor, and a pair of Thrush mufflers to help with the performance of my Goat. It was all the things we kids did in those days in the family driveway with good friends. I also managed to put a deep scratch in the back window with a putty knife while scraping the ice before heading to school one morning."

The now hopped-up GTO would be there for some very important milestones in Bob's life. "My wife, Deb, and I went on our first date in that in the car, as well as my senior prom. She loved that GTO as much as the killer '68 Chevelle SS that she piloted back in school. That Pontiac was such a big part of our early lives together," Bob says.

This story takes another familiar turn: Bob later decided to let his '69 go, trading it in for a new GTO in 1974. "Yeah, looking back it was a dumb move. There was the gas shortage and I figured I'd get better mileage with the 350 and automatic transmission in the 'new' smaller Ventura-based '74 GTO. It did have a warranty, which was important to me."

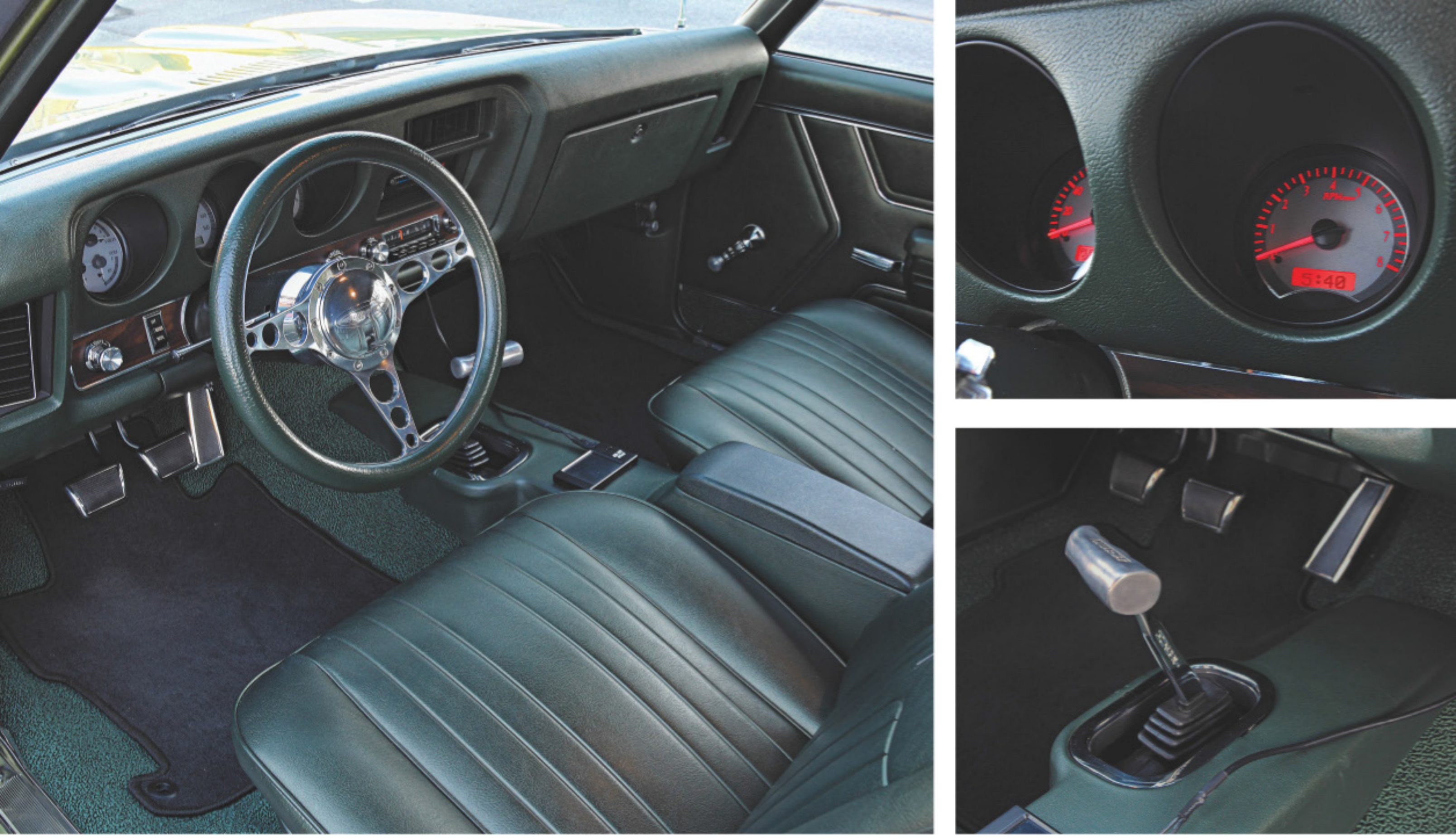
That '74 would not be the last Goat to roam in Bob's driveway—at least three more high-performance GTOs would come and go during the years to follow. But that first one was not easily forgotten, as Bob relates: "Deb constantly reminded me that I let *her* favorite GTO get away."

After Bob sold the last of his GTOs, he purchased a basket-case '36 Ford, which he then proceeded to build into a hot rod. "At that point I got heavy into the street rodding scene and put my GTO lust on the back burner for the time being. However, building that '36 gave me the confidence to take on and build any car, no matter what condition it was in." That belief in himself would come in handy when taking on his next big project.

By 2005, Bob had spent much of the previous two decades embedded in the street rod lifestyle, cruising around in his wild Ford hot rod. However, while going through some old paperwork, he made a discovery that would change his life. "We found an old bank envelope that was buried in my father's desk. It had 'GTO Papers' written on the outside. It turned out to be the retail order form from my 1969 GTO. The copy also included the car's VIN."

Unknown to Bob, Deb and her sister (who owned a title service) ran the VIN digits on a PennDOT computer system and got a hit. The information included the address of the last known owner, which was about three hours away from Strasburg. "Unbeknownst to me, my wife ended up contacting the owner and inquired about the car," Bob explains. "Unfortunately, he said it was not for sale." Not taking no for an answer, Deb then sent the owner a postcard with an offer to buy it, leading him to reconsider. After negotiations, a date was set and Bob went with his friend Veryl Greis—and his rollback—to pick up the car.

The then-current owner stated his father had bought the GTO in 1982. It was not running at the time due to a spun bearing; it sat out in a field for over 20 years before the father handed it off to his son. A 428-cu.in. engine had been sourced for the GTO, and it slowly got worked on over the years. "Amazingly, the son had registered the car just two weeks before Deb contacted him. The sun, moon, and stars



The interior was restored to mostly stock, save for the Dakota Digital instruments in the factory gauge panel, the Budnik steering wheel, and period Hurst T-handle.

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Bob Bachman was fortunate to spend time at a Pontiac dealer during his childhood in the '60s, and also to get his first GTO back decades after selling it.

aligned for us. My wife surprised me with the good news the night before we picked it up. It was April 1st, so I thought it was a joke. But it was real. The owner even swapped back in the original drivetrain before we got it."

Once home, Bob started to lay the groundwork for the GTO's restoration. "The car was rough. The doors were full of pine needles, the paint was now a shade of army green with surface rust, and the vinyl top was a mess." Amazingly, the car still had some of Bob's handiwork in it, including the Hurst T-handle between the buckets, the silver drums, and that scratch in the back window. "It didn't matter what it looked like. I was ready to get on it."

The car needed extensive bodywork. Even though most of the body panels had been reproduced by that point, Bob decided to fix the original sheetmetal wherever he could. He used reproduction parts to replace sections of the floors, plus a rear window panel and front valence. "I also had to replace the driver's quarter panel—during a snowstorm in 1974, a tire chain broke, and whipped the hell out of that panel. I did all the welding and the bodywork on the car. I also sprayed the epoxy primer right there in my garage."

The GTO then sat for a dozen years before Bob got back on it. Finally, he resumed and did the final panel alignment and fine sanding before taking it to good buddy Mike Heim's Quality Custom Rides in Lancaster. "Mike let me use his gun and spray booth to skin the GTO in its original Limelight Green Poly, custom mixed by Chet Eckman at PPG." Once finished, the car came back to Bob's garage for final assembly. "Mike guided me on the project and helped me take it to the next level."

It's at this point that Bob got a good dose of inspiration from Barry White of Street Rod Repair out in Corona, California. White was featured in an automotive TV show that highlighted the rebuilding of muscle cars and made a statement that really struck Jim. "Barry said, 'Why rebuild yesterday's muscle car with yesterday's parts?' That motivated me to turn my Goat into a Pro-Touring machine, built with a modern suspension, brakes, fuel injection, and overdrive. From there I started sourcing the parts needed to see this to fruition."

Bob stowed away the original drivetrain in his shed and purchased a '70 WT 400 block from a friend. It

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was then sent to good friend Dave Warner, who rebuilt the engine using Edelbrock 72-cc aluminum heads and a Performer intake manifold that mounts a FiTech fuel injection set-up. Ram Air exhaust manifolds get rid of the spent gasses.

A Legend LGT-700 five-speed manual, built with a McLeod twin-disc clutch, channels power a Pontiac 10-bolt axle with 3.55 gears. Bob upgraded to Wilwood disc brakes at the corners; UMI Performance tubular control arms and anti-sway bars were installed in both front and rear along with Viking double adjustable coilover shocks to obtain the ride and handling Bob was after. To go with more modern wheels and tires, yet still maintain the original style, Bob selected 18-inch "Bandit" wheels from US Mags, which resemble Pontiac's Rally II wheels.

The interior was redone with a kit from Legendary Interiors, though Bob says it took six months to locate an NOS dark green vinyl top. Bob's brother John, who owns Custom Auto Wiring in Lancaster, installed a fresh wiring harness from American Autowire. The dash was reskinned by Al Knoch Corvette and fitted with a Dakota Digital electronic gauge cluster.

Once the GTO was finished, it emerged as a consistent show winner wherever it went. "We got it on the road in 2018 and was first shown at the GTOAA meet in Valley Forge, Pennsylvania. It won Concours Gold in the Modified Class. I've shown it a bunch since, and we plan to start putting on some serious miles this year," he says.

"This second go around with the GTO would never have happened without the help and support of my wife, Deb. She found the car and was the inspiration for its rebirth, so I can't thank her enough. It's a blast to drive with its quick steering, big brakes, and coilover suspension. It really drives like a late-model car. When we do take it out it's like a time warp for us, bringing us back to our youth and when we first met. I guess you can say time machines really do exist." ■

SPECIFICATIONS

1969 PONTIAC GTO

ENGINE

Block type	Pontiac 400 OHV V-8, cast-iron
Cylinder heads	Edelbrock Performer RPM Pontiac, aluminum, 72-cc chambers
Displacement	406 cubic inches
Bore x stroke	4.150 x 3.750 inches
Compression ratio	10.75:1
Horsepower	490 (est.)
Torque	500 (est.)
Camshaft	Lunati Voodoo hydraulic roller
Induction system	FiTech fuel injection, Edelbrock Performer RPM manifold, Walbro in-tank pump
Ignition system	MSD Pro Billet distributor, MSD Blaster Coil
Exhaust system	Ram Air exhaust manifolds, custom stainless 2.5-in exhaust, Magnaflow mufflers

TRANSMISSION

Type	Legend LGT-700 five-speed manual, McLeod twin-disc clutch
Ratios	1st/2.97:1 … 2nd/2.07:1 … 3rd/1.43:1 … 4th/1.00:1 … 5th/0.80:1

DIFFERENTIAL

Type	GM B-O-P 8.2-in 10-bolt w/ limited-slip
Ratio	3.55:1

STEERING

Type	GM Saginaw power-assisted recirculating ball, IROC fast-ratio; GM Type II pump
Ratio	12.7:1

SUSPENSION

Front	UMI Performance tubular control arms, anti-sway bar, Viking double-adjustable coilover shocks
Rear	UMI Performance tubular control arms, anti-sway bar, Viking double-adjustable coilover shocks

BRAKES

Type	Hydraulic four-wheel disc Front: Wilwood 13.00-in slotted/cross-drilled rotors Rear: Wilwood 11.13-in slotted/cross-drilled rotors

WHEELS & TIRES

Wheels	U.S. Mags Bandit Front: 18 x 8 inches Rear: 18 x 9 inches
Tires	BFGoodrich Comp T/A Front: 225/40-18 Rear: 275/40-18

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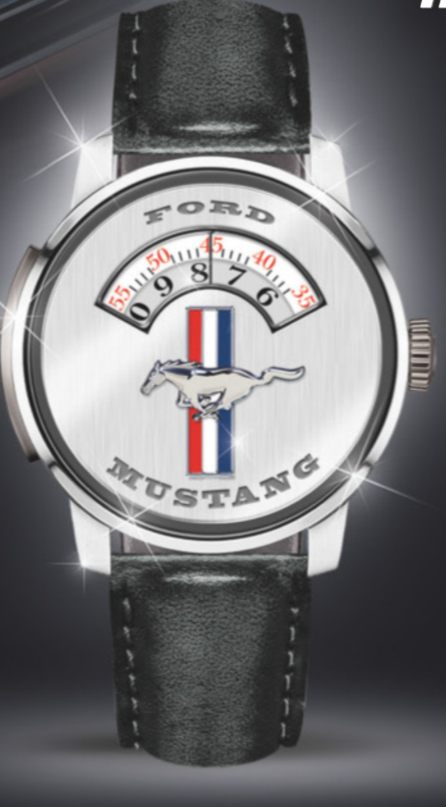

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WORDS AND PHOTOGRAPHY BY JEFF KOCH

THINK ABOUT AMERICAN PERFORMANCE CARS IN 1978. SLIM PICKINGS, WE KNOW. WHAT WAS OUT THERE? Corvette, yes; expensive, though. Trans Am? Sure, but the spats and stickers weren't for everyone. Who was making a proper four-seat, big-engine coupe in the old-school muscle car mode? Almost no one. *Almost.* Contrary to these photos, not even Dodge, really.

Chrysler Corporation was rarely averse to engaging in a little parts-bin engineering, particularly when developing models during the 1970s. It shouldn't have surprised anyone when the Dodge Magnum was introduced as being "all-new" for its 1978 debut. Cynics would call it a Charger SE/Cordoba with new front and rear (even the window sticker listed it as a "Charger SE/Magnum XE"). Rectangular quad lights lived behind retractable clear plastic covers, and an upright four-slot grille was so reminiscent of the '30s-era Cord 812 that Dodge's own press materials mentioned the defunct carmaker in passing. The Charger SE's carryover fender and quarter bulges, an ersatz take on GM's Colonnade-A-body Streamline Moderne body cues, remained, but Dodge gave the Magnum new door skins to make those bulges seem even more pronounced, with a distinct break between the front and rear swells. The sharp new nose was far sleeker than the Cordoba and Charger SE's very upright grilles. While comparisons to the Dodge Charger Daytona would be wholly inappropriate, the Magnum's nose added a stylish, aggressive edge to a market segment where filigree and ostentation were par for the course. A new priority was placed on handling, though the basic chassis was pure Mopar B-body, tracing clear back to the fall of 1961. The Magnum arrived with standard front and rear anti-

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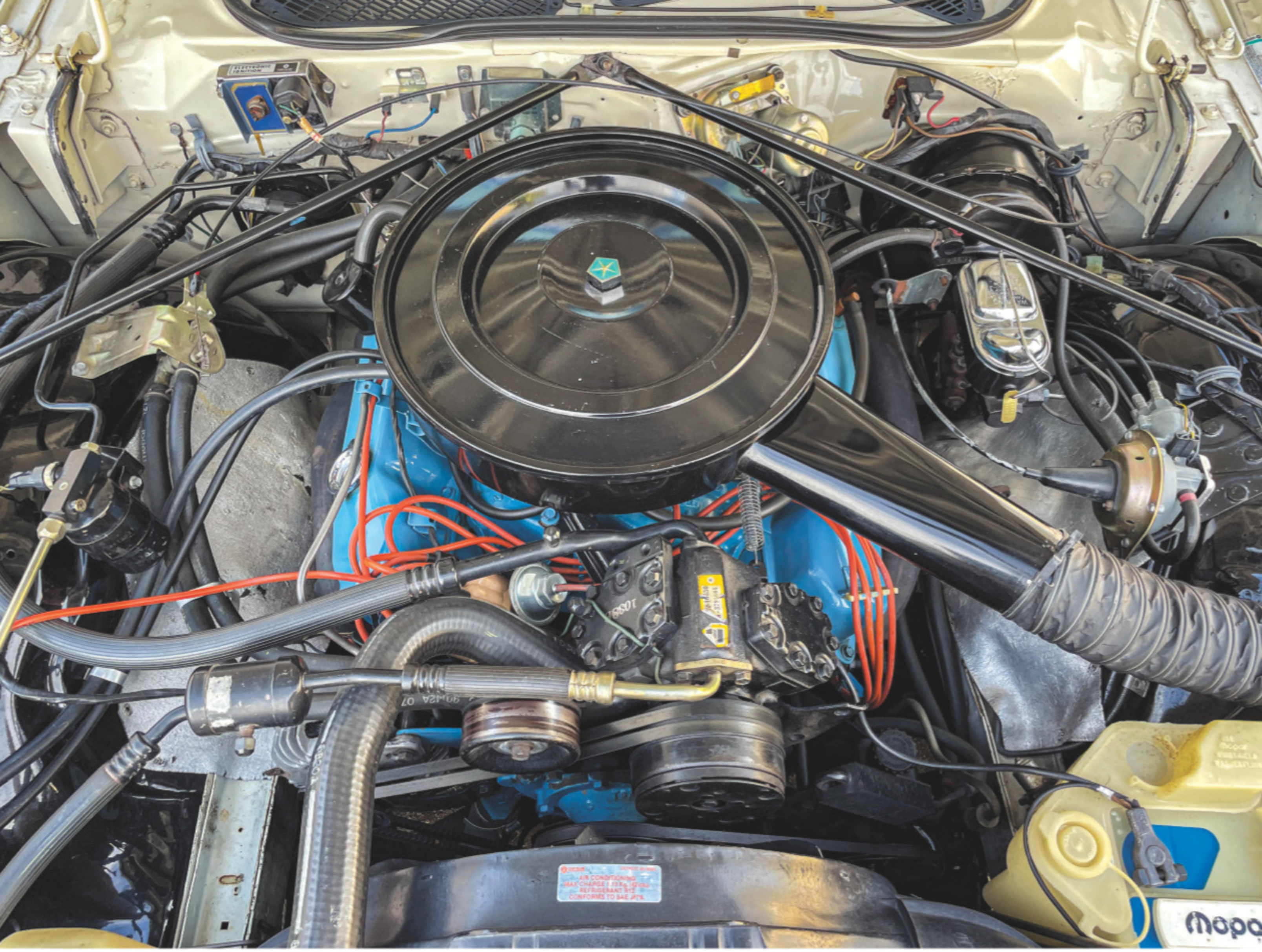


sway bars for better handling than you might otherwise expect from a car of this size.

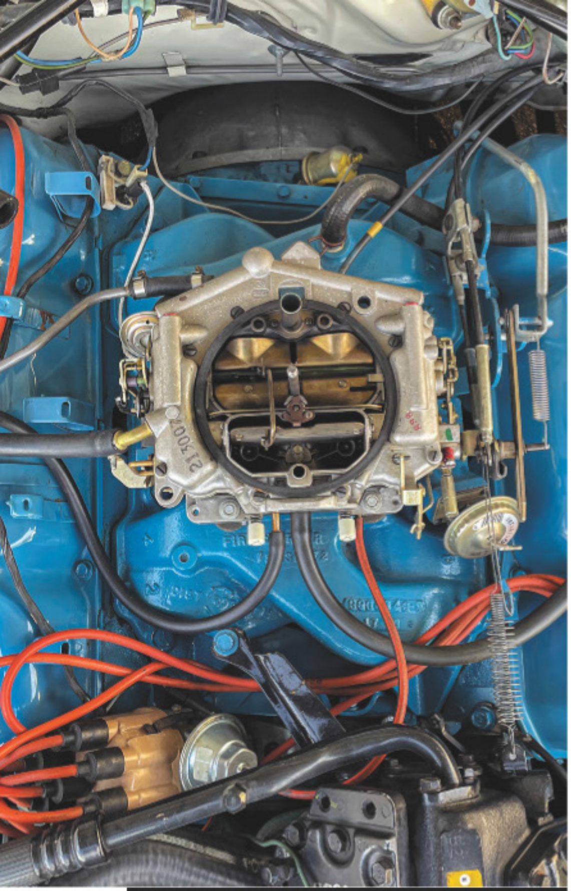
Still, there are always those who stoke the performance flame, those who know how to work their way around an order sheet for maximum effect. These sorts combine a unique vision and the wily ability to get what they want. David Henriksen of Phoenix, Arizona, is one of those people. He just missed out on the muscle car era, but when he laid eyes on Chrysler's new-for-1975 Cordoba, he thought it would make a great new-generation 300. Give it 440 power and heavy-duty suspension, he figured, and you'd be most of the way there. A Dodge Charger SE, essentially a de-contented Cordoba, was more in his price range, but "the Charger looked boring," he tells us. "I said, why don't they put a sloping nose on it and make it look faster? Three years later it happened with the Magnum."

He marched into Dana Brothers Motor Company in nearby Tempe in the spring of '78 and, having perused the option sheet for a couple of months, ordered the Magnum XE of his dreams.

The first order of business was the powertrain. David skipped past the base 318 and the two- and four-barrel 360s and went straight for Chrysler's last-of-the-big-blocks 400-cube V-8. There were two 400s available: the E64-code 400 (with lockup torque converter and open 2.45:1 rear axle ratio in an 8¼-inch housing) and the heavy-duty cop-spec 400, known to alphanumeric code nerds as E68.

Not available in California or in high-altitude areas, the single-exhaust E68 cost an extra $339.95, and featured a shot-peened nodular cast-iron crank, a double-roller timing chain, a windage tray, chromed exhaust valve stems with Viton seals and shields, silicone plug wires, and more. A TorqueFlite that did without Chrysler's new lockup torque converter was also part of the program—no stick Magnums were available—although the transmission also came with an auxiliary oil cooler.

The E68 was meant to bolster Chrysler's strong police-car presence, and those that made it into civilian-spec Magnums for 1978 required the presence of the $182.90 A36 heavy-duty trailer-assist package. Suspension upgrades included heavier-duty shocks all around, five-leaf rear springs instead of four, HR78-15 steel-belted radials, and a power-steering cooler. This also mandated a 3.25:1 final drive in a 9¼-inch rear axle housing. Sure-Grip was available.



Mopar's 400-cubic-inch E68-code V-8 was primarily a police-spec and heavy-duty powerpoint, unavailable in California and at high elevations for 1978. It responded to a number of Mopar big-block speed tricks.

Though Dodge was offering the Magnum GT as part of the new model's lineup, something that would seem right in line with David's desires for a performance-tinged B-body, the A36 tow setup was restricted on the GT, so David's Magnum was built as plain ol' XE. Something the A36 heavy-duty package did not include, strangely, was a rear anti-sway bar. No one told David, however, and he was hopping mad. "The sales brochures claimed that the rear bar was standard equipment in the Magnum. Rear bar delete was not mentioned with the features of A36, so I demanded that the dealer order me a rear bar package." He got it. And then? Before installation, "I chromed it."

The rest of the ordering process was a matter of style and comfort: Eggshell White paint, no vinyl top (and therefore no provision for rear-quarter window louvers) or T-roof, and protective bumper rub strips outside. The inside feels a little more '70s. Power steering and front disc brakes were both standard on Magnum, but David also ticked off the boxes for air conditioning (practically mandatory for the desert); power seats, windows, and locks; leather bucket seats with console (ordering leather unlocked an otherwise-unavailable reclining feature); twin remote mirrors; a tach; cruise control; clock; four-speaker AM/FM stereo with 8-track; leather-wrapped tilt wheel; color-keyed seatbelts; and plenty more. A Magnum that started at $5,509 was optioned up to an eye-watering $8,914.85, minus taxes. (By way of comparison, a base Corvette was $9,600 in 1978.) With that much sport and that much luxury to be had in a single Pentastar package, it seemed as if David's new-generation 300 dream had come to fruition.

Except ... well, while Chrysler's hard-fought reputation for building quality cars in the first half of the '50s had long since disappeared, David wasn't about to allow any factory-installed deficiencies in his $9,000 Magnum. The missing rear anti-sway bar was one of a litany of issues: the interior was ordered in white with blue accents (console, shag carpet, doors, dash et al), which unlocked the availability of color-matched bumper rub strips… yet they arrived in black. The transmission also had the wrong stall-speed torque converter. All of these were solved easily enough. But from its earliest days, the cooling fan was hitting

VSC-716
ARIZONA
GRAND CANYON STATE
400 MAGNUM
ROAD HUGGER
RADIAL G/T

the shroud; David's brother Richard worked at the nearby Chrysler test center, so they got the Magnum on a lift and soon discovered that the K-frame had been welded together incorrectly. Once David somehow convinced the dealership to give him a new K-frame and let him install it himself, he found that the motor mounts were in the wrong place — as it turns out, the dealer got him a K-frame for a 360-powered car! By this time the 12-month warranty had expired, and the Magnum sat for nearly two years as David literally picked (and picked up) the pieces.

As the Magnum sat, David took the opportunity to optimize things further. The factory .94-inch front torsion bars were replaced with a set of thicker .98-inch bars, and the .94-inch front anti-sway bar was replaced with a beefy '79-era police-spec 1.15-inch piece. Stock wheels were replaced with a set of Western Superlite wheels (the sort of thing you'd have seen on Trans-Am racers about a decade earlier) with Wedgewood Blue centers to match the interior and rub strips. The tires were upgraded to 255/60R15, and nicely fill out those gently bulged wheel openings.

While things were apart, David also took the opportunity to completely rebuild the exhaust system. Starting with a set of 1969-era big-block manifolds, with a removed-and-plugged heat riser and smoothed ports, he used 2 ½-inch mandrel-bent pipe, a 2 ½-inch H-pipe, 21-inch Cyclone Hemi mufflers, and exhaust tips formed from the driveshaft of a '57 Dodge. The factory-single-pipe Magnum had an offset fuel tank, so David re-centered it to make room for the new exhaust. He doesn't have dyno numbers, but he has ample seat-of-the-pants experience. "When it was new, it wouldn't spin the tires on gravel. With the new exhaust, if I lit it up, [the tires] wouldn't quit spinning. After I did the exhaust, it felt twice as strong. It was choked to death before, and the exhaust really woke it up."

Pop the hood, and while most of what's here appears stock, there are a couple of hiding-in-plain-sight changes. The Lean Burn system was jettisoned long ago. The eye sees what appears to be a stock air cleaner, but it uses a base from a '72 New Yorker and has a custom-made snorkel that connects to the original air hose. The air cleaner hides a former NOS Canadian-spec four-barrel carburetor that David knew of from reading but had never seen until five years ago. Why Canadian? "It had bigger primaries," he reveals.

A suite of 400 Magnum badges festoons the fenders and decklid; they replicate badges used on a 1972 Charger Rallye. "Also, in '72, if you didn't want the Rallye hood, there's a small badge that was mounted to the fender; one of these is on my dash, replacing the Magnum nameplate, which was plastic… and bent," David says, laughing.

With barely 9,000 miles on the odometer, David has traveled an average of about 200 miles a year in the 45 years he's owned this Magnum. Everything here — paint, soft parts — is original to the car, minus the mods mentioned earlier, plus fluids and wear items. He estimates that just 150 Magnums were built with the 400-cu.in. E68 V-8 before Mopar ended big-block passenger-car production for good. How many have seen another E68-powered Magnum in person? How many still remain?

David Henriksen built the closest thing he could manage to a Chrysler 300 in 1978. Unknown to him at the time, Chrysler Division was planning its own 300 for 1979, based (even more obviously) on the Cordoba. The largest-possible engine was a police-spec 360, but most of the same tricks David used to unleash his Magnum's potential — including the A36 heavy-duty suspension — were part of the package. They were even painted white.

"I was tempted [to trade up to the 300] but I resist temptation very well. I special ordered my Magnum; with the 300s, there wasn't much to order special — mostly a choice of roof. Did I want T-tops, a sunroof, or neither? They were the way they were. My Magnum is unique and special. The engine I got in my Magnum was very limited — it's the last of the big-blocks." ■

Mopars Unlimited of Arizona
RADIAL G/T

SPECIFICATIONS

1978 DODGE MAGNUM

ENGINE

Block type	Chrysler B-series OHV V-8, cast-iron
Cylinder heads	Chrysler cast-iron OHV
Displacement	400 cubic inches
Bore x stroke	4.34 inches x 3.38 inches
Compression ratio	8.2:1
Pistons	Chrysler aluminum
Connecting rods	Chrysler forged steel
Horsepower @ rpm	195 @ 3,600 (factory rated)
Torque @ rpm	305 foot-pounds @ 3,200 (factory rated)
Camshaft type	Chrysler hydraulic flat-tappet (factory stock)
Duration	260/268 degrees (adv), intake exhaust
Lift	.434/.430-in, intake/exhaust
Valvetrain	Chrysler shaft-mount rocker arms
Fuel system	Canadian-spec four-barrel Carter carburetor
Lubrication system	Stock with E68-spec windage tray
Ignition system	Chrysler electronic, with Lean Burn delete
Exhaust system	1969 440 Magnum exhaust manifolds; 2.5-inch mandrel-bent pipe; H-pipe; Cyclone Hemi mufflers
Original engine	400-cubic inch V-8

TRANSMISSION

Type	Chrysler TorqueFlite three-speed automatic with external cooler
Ratios	1st/2.45:1 ... 2nd /1.45:1 ... 3rd /1.00:1 ... Reverse/2.20:1

DIFFERENTIAL

Type	Mopar 9 1/4 with Sure-Grip limited-slip differential
Ratio	3.25:1

STEERING

Type	Power-assisted recirculating ball
Turns, lock-to-lock	3.7

BRAKES

Front	11.78 vented disc
Rear	11-inch drum

SUSPENSION

Front	A36 towing package/HD shocks, .94-inch torsion bars (now 0.98-inch), .94-inch anti-sway bar (now 1.15-inch)
Rear	A36 towing Package/HD shocks, 5-leaf rear springs, stock anti-sway bar

WHEELS & TIRES

Wheels	Western Starlite aluminum alloy Front/Rear: 15 x 8.5 inches
Tires	Road Hugger Radial G/T white-letter steel-belted radials Front/Rear: 255/60R15

PERFORMANCE

Acceleration	Not tested

the D.U.I. report
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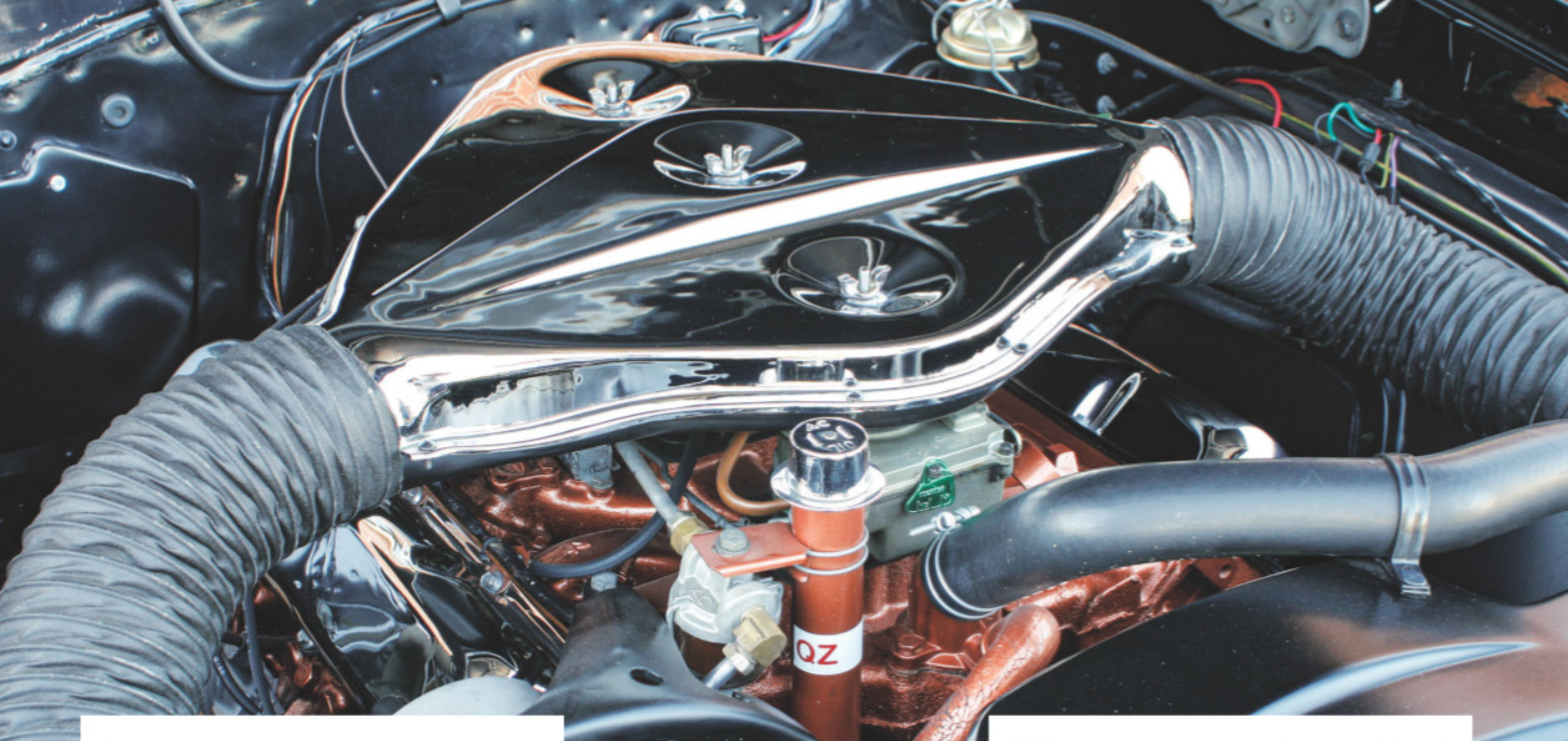
LOST HISTORY LEADS TO A TALE OF DISCOVERY FOR THIS ’66 OLDSMOBILE

WORDS AND PHOTOGRAPHY BY ERIC ENGLISH

INPUTS WE RECEIVE DURING OUR YOUTH VERY OFTEN

set the tone for direction in adult life, and for Jim Mueller and the Oldsmobile marque, that sentiment certainly holds true. You see, Jim grew up surrounded by Oldsmobiles during his formative years, so it's of no surprise that he might own a Lansing classic as an adult. Yet what is surprising is the fact that until this particular '66 showed up on his radar screen in 2017, he'd been without his own Olds since his very first car — a '66 Cutlass four-door he purchased in 1973.

"I've always been into cars and trucks, but for whatever reason, I really gravitated to the Jeep scene for my adult-owned vehicles," Jim says. "More recently, I wanted to get back to my Oldsmobile roots, and had been thinking of building a modified '66 4-4-2. You know, something with an LS engine and overdrive, modern suspension and brakes – the kind of



Ordering the triple two-barrel Rochester carbs bumped horsepower from the '66 four-barrel 400's 350-hp rating, to 360. Detailing here is correct in terms of the carburetor tag color, with the front getting a green tag, the middle a gold tag, and the rear a black tag. According to A-body guru Curt Anderson, total cfm for the arrangement was 867–the end carbs being 299 cfm each and the center 269 cfm.

ourselves; it's important to understand the roots of Jim's Olds connection. "My dad worked for Oldsmobile for 35 years, most of them as a zone manager in Houston, Cleveland, and Minneapolis. He was always driving the latest and greatest; as an example, I recall him having one of the first all-new Toronados in Minneapolis in 1966. He tended to have those big full-size cars for his company rides, but my dad also made sure my mom was in a new Olds every year too, and that was almost always an A-body of some kind. Some of the more memorable ones were a '70 Rallye 350 and a '75 Hurst/Olds with 'Hurst Hatch' T-tops and swiveling bucket seats."

With that sort of upbringing, it's no surprise Jim maintained a fondness for Lansing's Rockets after he'd grown up. Though he did have varied automotive interests, he still wanted to find what he considered the ultimate Olds muscle car.

"I discovered this particular 4-4-2 on the internet late one night, and it really struck a chord with me," Jim explains. "It was everything I could have wanted in a classic Oldsmobile muscle car." The '66 was for sale through a well-known classic car dealer, and Jim also learned it had sold the previous year through one of the big auction houses. This chain of events left Jim in a position where he knew relatively little about the car's history, and yet the uniqueness of the '66 hooked him hard. "I took a risk and bought it after talking extensively with the dealership and reviewing detailed photos. Other than that, I bought it sight unseen. That wasn't my preference, but in this case, it worked out great."

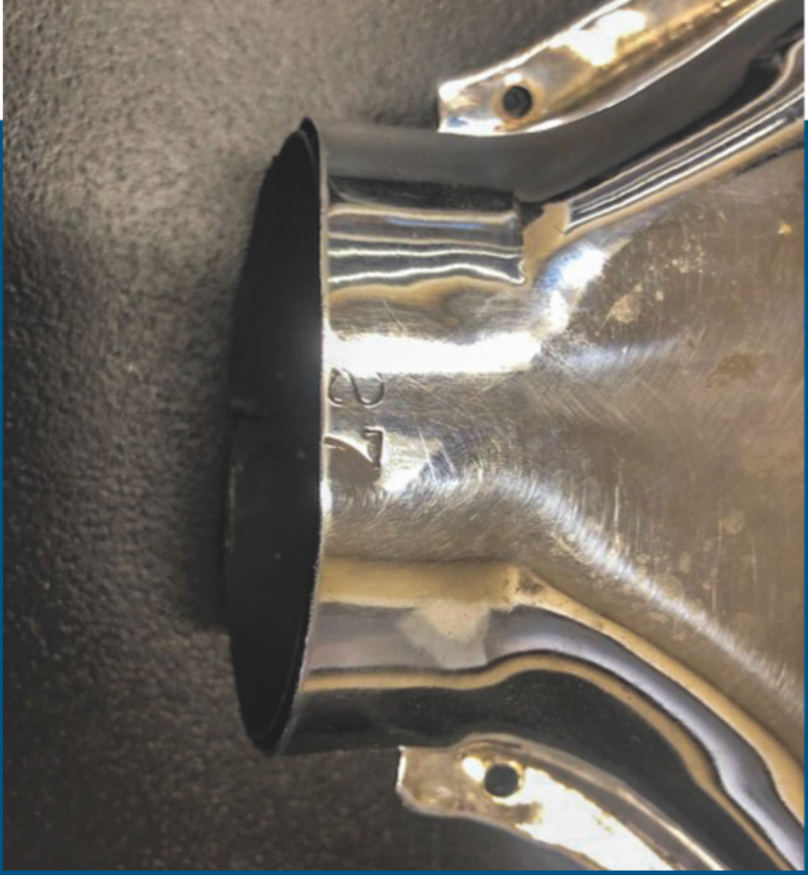
What arrived at Jim's house a short time later is one of the more interesting '66 A-bodies you're likely to find. In addition to an unusual black-with-turquoise color combination, Jim's car sports an M21 close-ratio four-speed, 3.90:1 rear axle with limited-slip, radio and heater deletes, factory tach, and L69 "Tri-Carb" induction. Topping it all off is the "Track-Pac" cold air induction package, which included a trunk-mounted battery. Of course, most of this equipment would require a paper trail to prove the car was originally delivered in this configuration—a paper trail that was absent in this case, as was any knowledge of who was involved in the restoration. Nevertheless, the '66 was exquisite.

Some enthusiasts who aren't experts on Olds muscle cars may be scratching their heads over the "Track-Pac" terminology. To fully understand its genesis, let's rewind to June of 1966 when Oldsmobile produced a special drag-race package for the 4-4-2, well known now as the W-30. This first year of W-30 production resulted in just 54 units being built, the effort being an attempt to make Olds more competitive in NHRA Stock and Super Stock competition, which in turn required a minimum of 50 examples to be produced All '66 W-30s received the same Tri-Carb setup as the L69 street option, but the W-30s also got a factory blueprinted engine with a hotter hydraulic cam and a chromed air cleaner "shroud" that received

SHROUD SEQUENCE

If you're curious as to why the roughly 100 cold-air shrouds (air cleaner) from the earliest manufacturing run were numbered, we had the same question while researching this story. We discussed the issue with Curt Anderson, who explained it as follows:

"The original shrouds are a two-piece sheetmetal assembly that you wouldn't consider 'mass produced' in the way that most air cleaners are. It was a niche run, and thus had some handcrafted elements. One of these was the way the top and bottom were attached — they were mated with ten screws, with each assembly being hand drilled. This was done prior to the top being sent out for chroming, and thus there had to be a way of reuniting the top and bottom that had been together when they were drilled, otherwise there would have been mismatched holes. Numbering the top and bottom was the way the same parts could be identified and paired up again. The second run of shrouds was done by a different manufacturer using just eight screws and was a more automated process that didn't require numbering."



HUGH MITCHELL

The shroud pictured here is an example of a numbered piece from the first manufacturing run, not the shroud on our feature car. Clearly visible is the #27, which was stamped on both the top and bottom halves for identification purposes.

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cold air through 4-inch hoses with narrow scoops in the front bumper. Turn indicators were moved further inboard as a result of the scoops, and the 54 W-30s were also fitted with a trunk-mounted battery since the air ducts interfered with the traditional engine compartment battery location. Of course, no drag racer ever minded putting some extra weight over the rear tires.

As the W-30s made a splash on the dragstrips, other racers and enthusiasts wanted to take advantage of the W-30 ram-air system. Olds consequently made a package available over the counter to include the Tri-Carb shroud, ducting, and battery relocation hardware, which became known as the Track-Pac. While some L69 cars may have been fitted with the kit before they were sold new, it's safe to assume the bulk of the Track-Pacs were owner-added at a later date. No doubt a number of triple two-barrel carb setups were sold at the parts counter simultaneously, to four-barrel owners looking for a maximum upgrade over their stock induction.

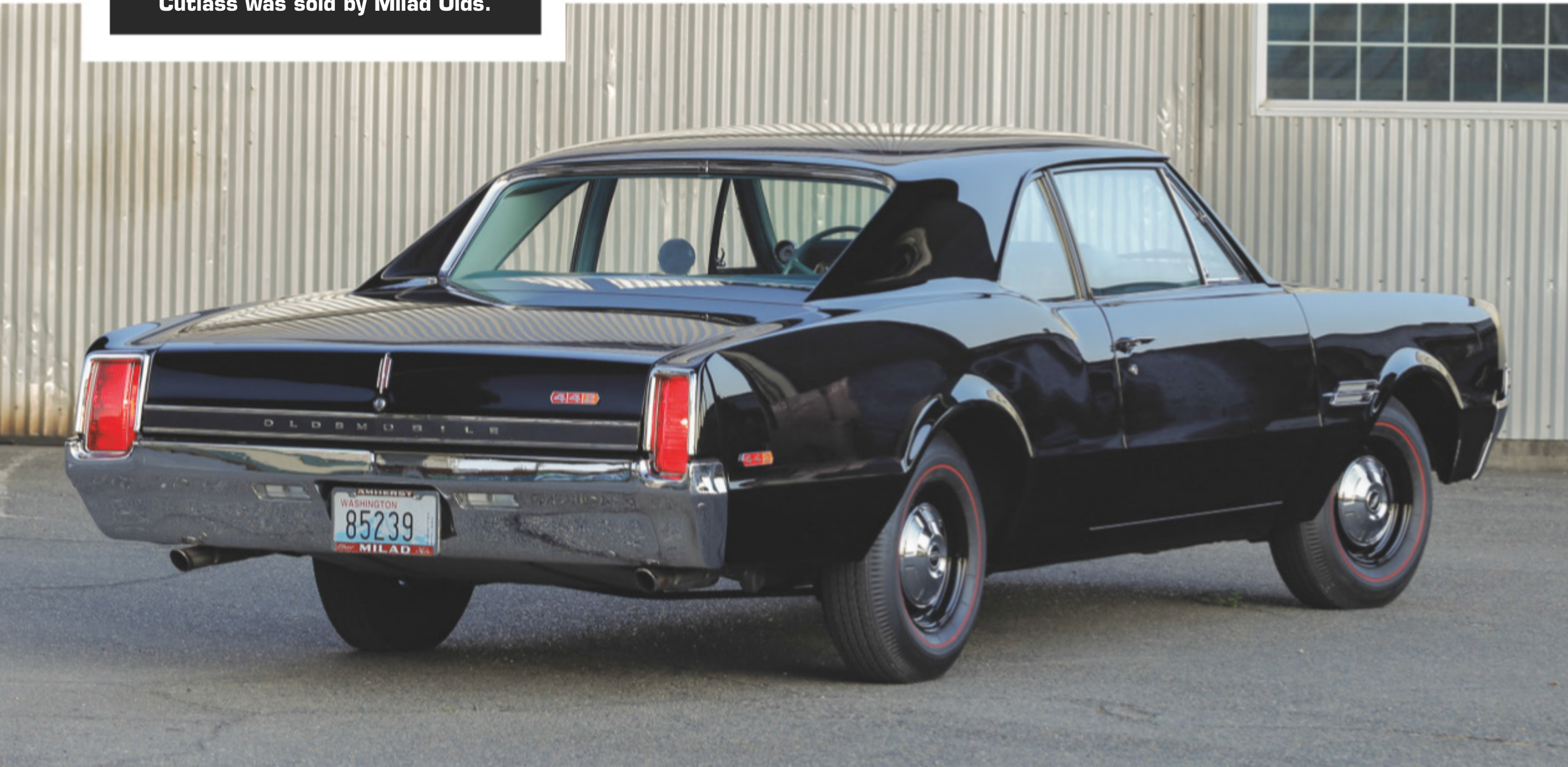
Noted '66 Olds expert Curt Anderson explained to us that two runs of triple-carb cold-air shrouds were manufactured — one in '66 and another in early '67. About 100 of the first style were made, "all numbered top and bottom and manufactured by Demmer Tool and Die in Lansing. Numbers 1-54 were used on the 54 factory W-30s. The balance of the first run of shrouds and associated hardware went to Olds-sponsored racers primarily, and to those who wanted them second. Most were gone by the late summer of '66, whereupon a second and similar style shroud was introduced in September '66, manufactured using permanent tooling by Standard Air Cleaner in Chicago. Based simply on the numbers that survive, I estimate that 50 to 100 of this second version were made. As to how many were in the #230195 1966 force-air (6V) package (which included the hoses and battery relocation components) or sold loose, I don't know. The package was available from October 1966 to May 1969, and the #230309 '67 force-air (4V) package was discontinued the same day. It's possible that many second-style shrouds were scrapped."

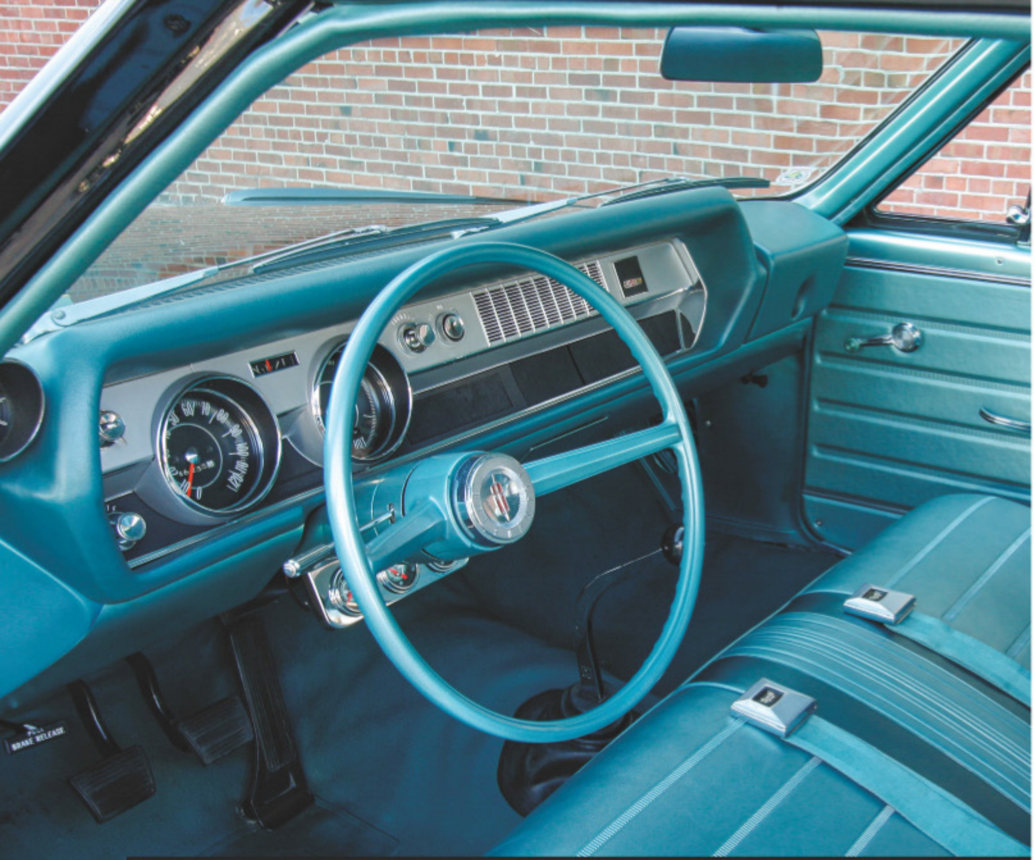
Curt says the shroud on Jim's car is from the second run in September, hence it almost had to have been installed sometime after the car was originally sold. Nevertheless, any version of a period shroud is a holy grail among '66 enthusiasts, and a real piece of Oldsmobile drag race history.

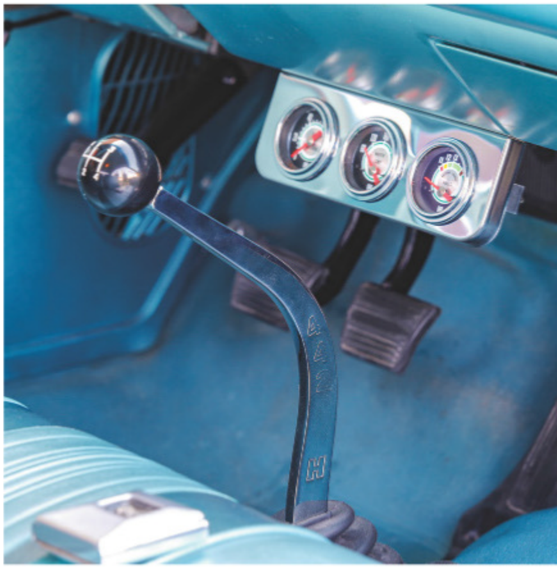
Not surprisingly, Jim wished he knew more about the restoration of his car, regardless of the origin of the shroud or other rare parts. When *HMM* expressed interest in doing a story on Jim's '66, it was the impetus he needed to dig in and find out more. Curt proved a big help, eventually connecting Jim with another like-minded enthusiast, Hugh Mitchell. It turns out that it was Hugh who restored Jim's car around 2008, and as a former owner and restorer of a handful of '66s — including two W-30s — it's safe to say he knows his way around such cars. Depending on your perspective, Hugh's explanation of Jim's '66 could be either somewhat welcome news or a major disappointment, and it demonstrates how important information can be lost in the shuffle of ownership changes.

Hugh says, "I built this car for myself to enjoy as my vision of the ultimate 4-4-2. I've had two W-30 cars, and they're so rare you just don't want to risk putting many miles on them. I wanted something as nice and

The period license plate frame has a connection with Jim, rather than this particular car. Milad Abraham was a friend of Jim's dad and owned a Chevrolet/Olds dealership near where Jim grew up in Ohio. Jim and his brother both worked for the dealership as teenagers, so naturally he snatched up the frame when he found it recently on the internet. Incidentally, Jim's first '66 Cutlass was sold by Milad Olds.







While race car spartan with the F-85 Club Coupe spec rubber floormat plus heater/radio deletes, the interior of Jim's car is nonetheless attractive due in part to its two-tone turquoise vinyl. Hurst shifter was standard fare for a '66 4-4-2 with a four-speed, while Stewart Warner green line gauges were a typical "Day Two" add.

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OWNER'S VIEW

Do I wish this car had turned out to be an original 4-4-2, or even better—an original L69 four-speed car? Of course. But am I disappointed by it? No. The quality of the car is first rate, from the restoration work, the authentic parts used, and the actual body that was restored. Every piece of it is as if it rolled out of the factory just the way it sits, and there's no way I could've put it together like this for the price I paid. I'm super happy to have pulled together the history thanks to Curt and Hugh. To know what was done, how it was done, and who did it, is really important to me. I love the car, as it's like the ultimate version of my first Cutlass—kinda what everyone dreams of if their first car was anything interesting at all.

—Jim Mueller

interesting as any restored show car, but something I could drive as much as I wanted. In essence, I built a L69, 4-4-2, Track-Pac tribute."

Hugh went on to explain that he'd found a legit L69 '66 4-4-2 in Mississippi in 2003. "It was complete, and also a complete rust bucket." Nevertheless, he bought the carcass and brought it home for parts. A year later, Hugh found a rust-free plain-Jane '66 F85 in Arizona sans drivetrain, which proved the proverbial match made in heaven.

Hugh moved forward on a complete restoration that saw the fitment of the rusty car's complete drivetrain into the Arizona-sourced chassis. The L69 engine itself was rebuilt, balanced, and blueprinted by Lonnie Fugate at L&T Machine, and fitted with a W-30-spec camshaft and valve springs. Hugh rebuilt the three two-barrel induction himself, and then topped it with the original Track-Pac shroud he'd had on a shelf for about 15 years. Likewise, the radio and heater-delete components were items Hugh had been saving for that "perfect project," and all appropriate 4-4-2 items were installed. Amos Walker worked his magic on the rust-free sheetmetal, eventually laying down a near-flawless PPG two-stage finish.

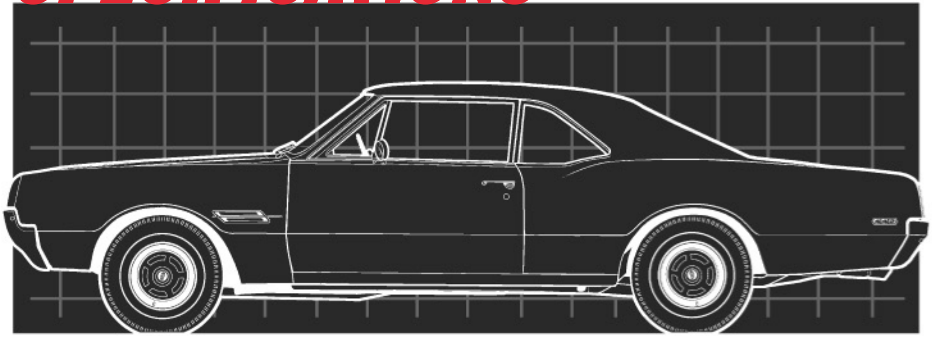
The interior is also standout and stripper all at the same time. We love the unusual turquoise vinyl paired with a black exterior. While the F85 Club Coupe got a standard rubber floormat instead of carpet, the overall feel is still one of Oldsmobile quality. Hugh used upholstery sourced from SMS Auto Fabrics in the original color for the interior resto, with Dean Morgan of Classic Auto Trim in charge of the install. The absent radio and heater controls makes for an extremely simple dash layout and sets the tone for a muscle machine with just one thing in mind.

Hugh set out to build this car to enjoy, but once completed, it had turned out so well that a fellow enthusiast made him an offer he couldn't refuse. Over the next 10 years the car was resold twice at major auctions, and then again when Jim bought it through a classic car dealer. Somewhere along the way, all history was lost. Jim would say this story turned out just fine for him—he has a classic '66 Olds fitted with some of the best and rarest parts available for the genre. While most weren't installed on this car originally, a bang-up restoration on a rust-free body leads to plenty of satisfaction.

However, the story does prove a cautionary tale as to how well-done tributes can quickly lose their history through a series of owners, and thus emphasizes a buyer-beware message when a paper trail doesn't exist. Owners of certain makes, like Ford and Pontiac, and some GM of Canada vehicles, can source production data resources, but for many brands, this is not an option.

In the end, the mystery of this stunning '66 Oldsmobile has been solved through help from those at the core of the hobby, and the current owner is now armed with the knowledge. In short, the car's history has been re-established, which is always a good thing. As for the F-85's future, news of Hugh's work does little to change Jim's thinking. The '66 is still his idea of the ultimate Olds, set up with factory parts to make it a competitive machine in the quarter-mile while also being show-car beautiful, and yet fully beckoning to have some miles rolled across the odometer. Early in this story we explained that Jim's original idea was to build a modified '66 to burn some rubber. We suggest he go ahead and let the good times roll with this one. ■

SPECIFICATIONS



1966 OLDSMOBILE F-85

ENGINE

Type	Oldsmobile "second design" OHV V-8, cast-iron block and cylinder heads
Cylinder heads	Oldsmobile cast-iron with 2.067/1.629-inch valves
Displacement	400 cubic inches
Bore x stroke	4.00 x 3.975 inches
Compression ratio	10.5:1
Horsepower @ rpm	360 @ 5,000
Torque @ rpm	440 @ 3,600
Valvetrain	Olds W-30 spec hydraulic flat-tappet camshaft and valve springs
Induction system	Cold air "shroud" w/4-in ducting from the front bumper. Cast-iron 3x2 intake with three 2V Rochester 2G carbs
Fuel system	Mechanical fuel pump
Lubrication system	Pressure; gear-type pump
Electrical system	12-volt
Exhaust system	Dual with dual mufflers and resonators

TRANSMISSION

Type	GM/Muncie M21 close-ratio four-speed manual
Ratios	1st/2.20:1 … 2nd/1.64:1 … 3rd/1.28:1 … 4th/1.00:1 … Reverse/2.27:1

DIFFERENTIAL

Type	GM B-O-P 10-bolt w/Anti-Spin limited-slip
Ratio	3.90:1

STEERING

Type	Recirculating ball, manual
Ratio	24:1

BRAKES

Type	Hydraulic, four-wheel drum, manual Front: 9.5 x 2.5-inch drum Rear: 9.5 x 2.0-inch drum

SUSPENSION

Front	Independent, unequal length A-arms, coil springs, tubular shocks, anti-sway bar
Rear	Upper and lower control arms, coil springs, tubular shocks, anti-sway bar

WHEELS & TIRES

Wheels	Stamped steel drop-center Front/Rear: 14 x 6 inches
Tires	Firestone Deluxe Champion Front/Rear: 7.75-14

PERFORMANCE*

0-60	6.3 sec
1/4-mile ET	14.8 sec @ 97 mph

*Source: Taken from a test published in the August 1966 issue of *Car Life* magazine of a 1966 4-4-2 with the L69 6V engine, four-speed transmission, and 3.55:1 axle ratio

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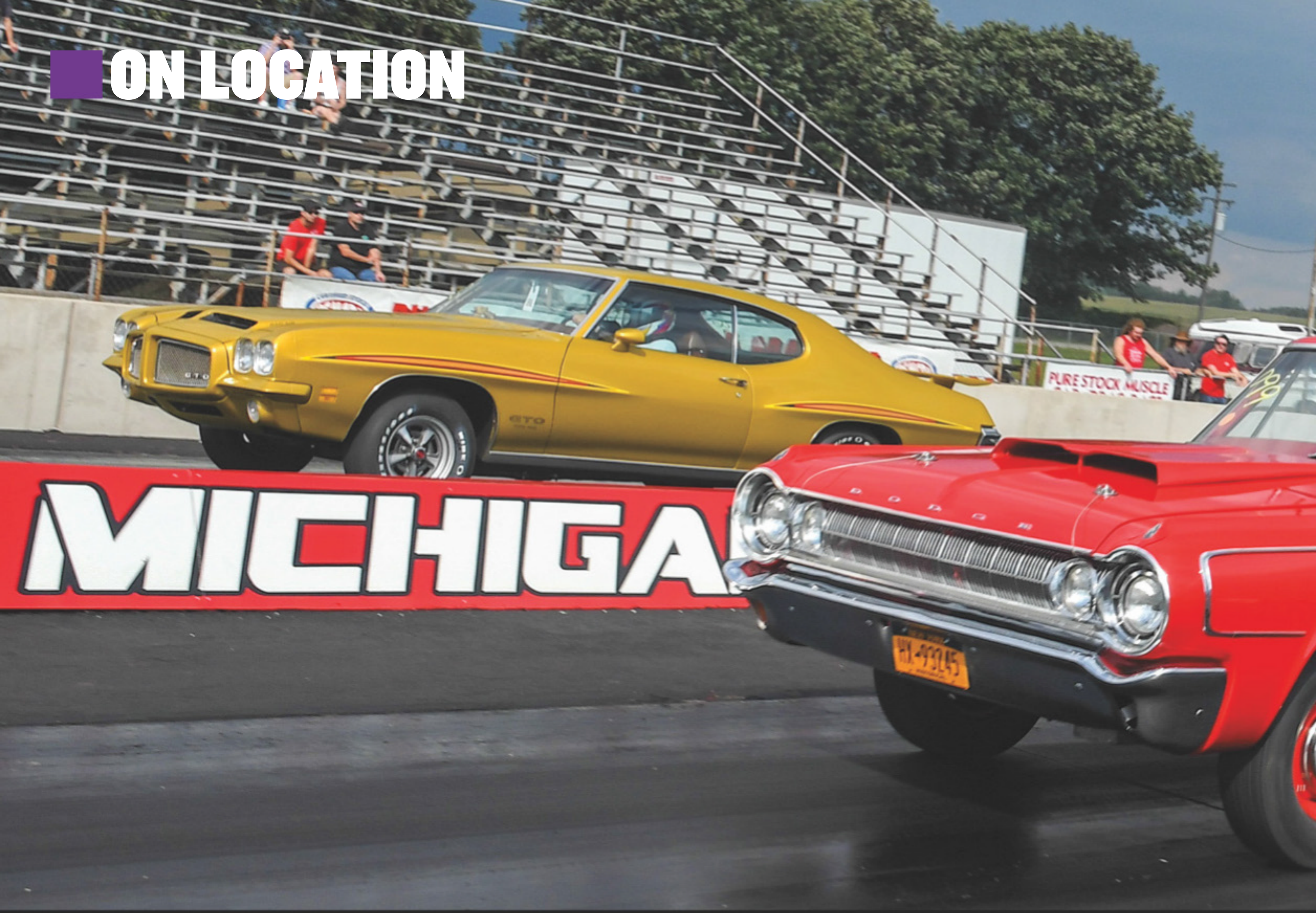
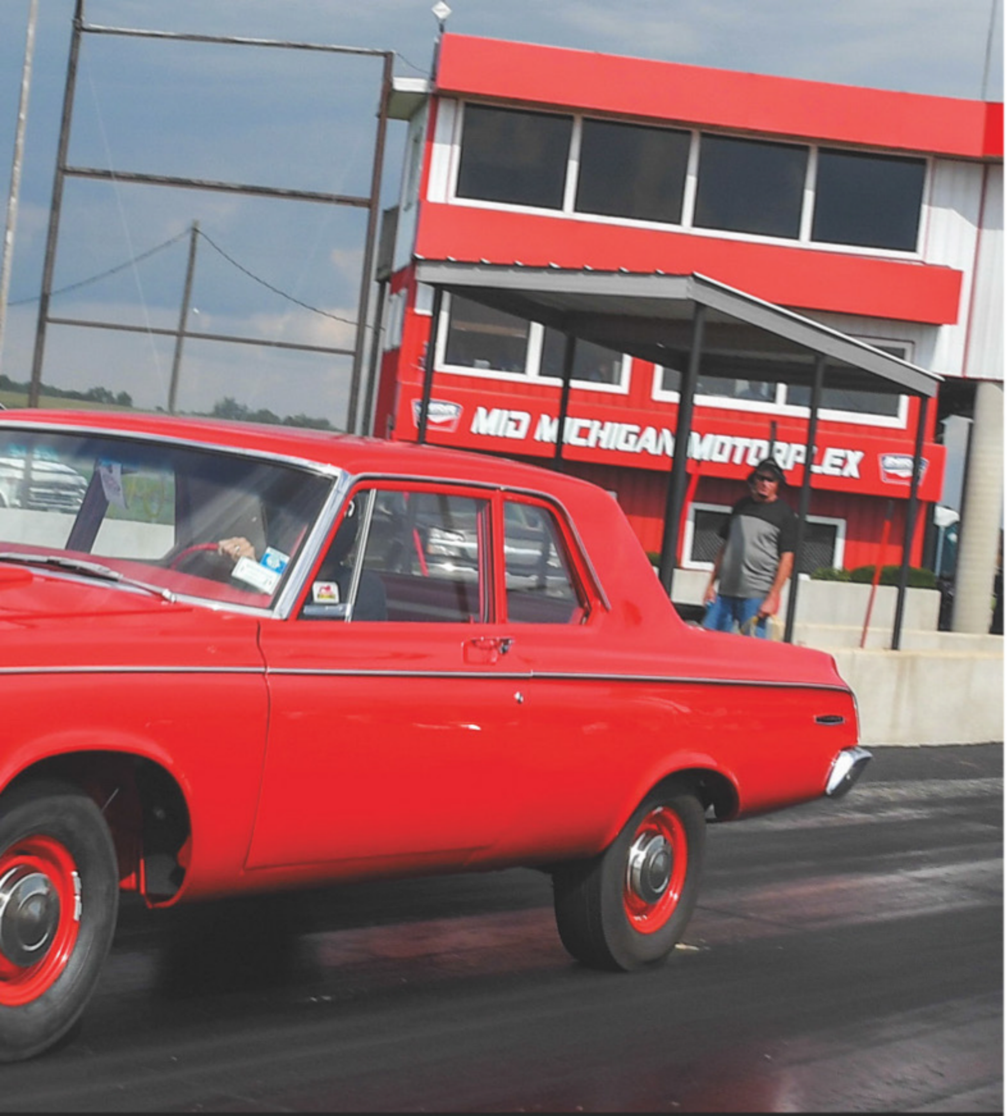

MICHIGA
PURE STOCK MUSCLE

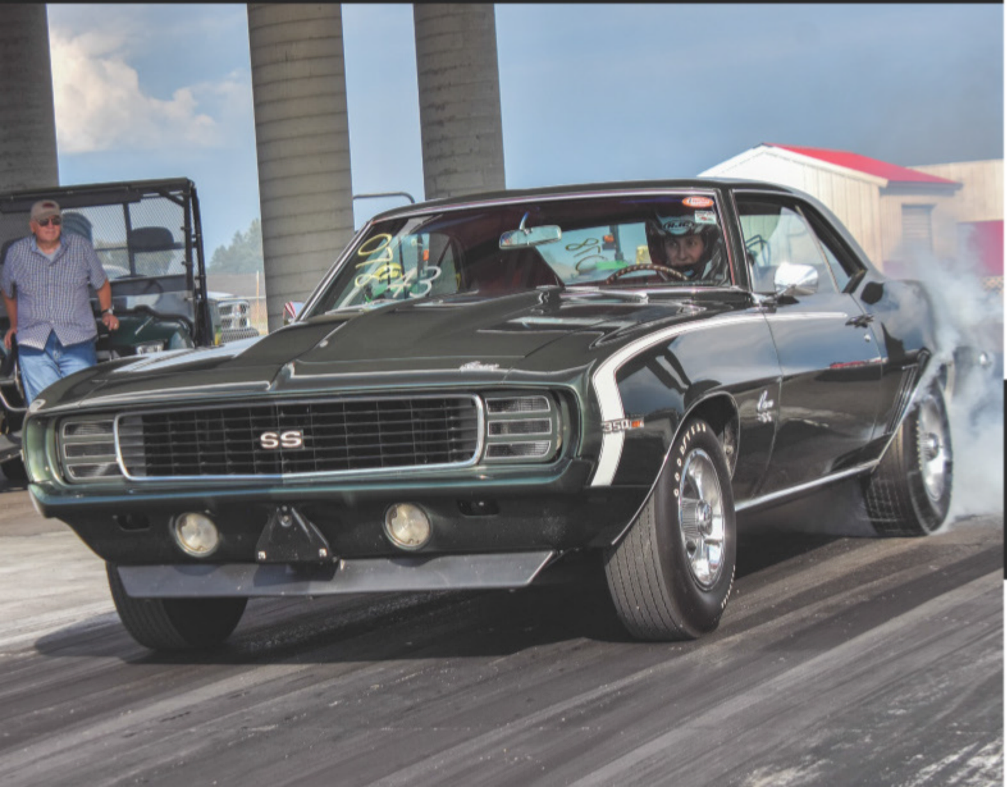
2022 PURE STOCK DRAGS

STILL GOING? HOW ABOUT STILL GROWING!

BY DONNY BRASS • PHOTOGRAPHY BY THE AUTHOR, TIM COSTELLO, AND CARTER MAHER



Some car owners have multiple cars, allowing for others to guest drive—that's what Danny Doyle was doing with Ed Cook's 1964 330 Max Wedge, taking it to a best time of 12.41 @ 116.18 in the first round against Ron Hammer's 1971 GTO. The problem was, the Maxie qualified at 12.98, which meant Danny broke out by more than .300 seconds and forfeited the shootout.



THE PURE STOCK MUSCLE CAR Drags continues to be one of the finest exhibitions of muscle cars in their natural environment: the drag strip. Every September at the Mid Michigan Motorplex, an impromptu concours car show breaks out in the staging lanes, as a field of the era's finest lines up looking like they'd just rolled out of their respective dealerships. The 2022 event featured over 130 cars, making it one of the biggest turnouts in event history. Racers from 18 states made the journey, and the Canadian racers made a welcome return.

The draw of the event is the comradery of the racers, the love of the cars, and the opportunity to represent your favorite brand against all other comers. Keep in mind there are no sponsors, prize money, or even trophies. Over the last 28 years, these racers have become a welcoming family, and newcomers are greeted with enthusiasm.

For the event, the format is simple enough: bring together a large group of stock factory offerings, line them up, and have fun doing it. Friday is spent making as many runs as you brought fuel for, with the best ET becoming your qualifying number. No matter where you qualify, a two-out-of-three shootout against an equal opponent is the reward. All shootouts are run heads-up (first over the finish line wins) on a sportsman tree (three amber bulbs).

While the auction prices for classic muscle cars are rising at a rapid rate, it is great to see these owners more interested in the numbers on their time slips. We've covered some of the action and we're also highlighting some of the next generation of racers—a growing group that shows this event ought to have a bright future.

Alana Beltrame joined the on-track action this year with her 1969 Camaro SS. Powered by a 350 backed by an automatic, the Camaro took Alana just shy of the 12s by turning a 13.04 @ 105.84.

Cheryl Eberle brought out this 1979 Firebird Formula all the way from Algoma, Wisconsin, to honor her late husband, John. After running the smog-era 400 down the track in just over 16 seconds, Cheryl earned a pairing with Neil Loughlin's 1964 Daytona. On this day the Stude was just a little bit quicker.

This is the fifth time Chris Teed has made the long trip from Orlando, Florida. With a 396 under the hood of his 1968 Nova SS, Chris ran a best of 12.855 @ 106.85.

Wes Alspaugh's 1965 Galaxie 500 and Scott Wiltse's 1966 Belvedere qualified just .002 seconds apart. Wes was the quicker with a 15.441, and after missing round one with a starter issue, stormed back to win the final two rounds.

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Studebaker pilot Steve Doershlag turned in a best of 13.40 @ 104.98 in his 1964 Challenger R3 and earned a race with Paul Vitale's 1967 Impala SS. Steve and Paul traded close victories in the first two races, but Paul took the match when Steve annihilated the tires in round 3.

MID MICHIGAN MOTORPLEX

A Pure Stock regular since 2007, Dick Cash now has his 1970 Torino Cobra running the best it ever has. Dick set a personal best of 13.54 @ 105.67 during qualifying while rowing the gears behind that 429 SCJ engine.

Lee Harms and Brad Rising took the opportunity during qualifying to send these two beautiful GTOs down the track. Lee's 1967 GTO earned a shootout win with a best of 13.29 @ 104.34 while Brad's '64 managed a best ET of 13.84 @ 102.22.

FASTEST CARS BY MAKE

Driver	Year	Make	Model	Best ET	Best MPH
Tim Clary	1969	Chevrolet	Chevelle	11.717	116.92
Bob Karakashian	1970	Plymouth	'Cuda	11.878	117.09
Adrian Beltrame	1969	Pontiac	Firebird	12.066	115.04
Dan Kruger	1969	Dodge	Super Bee	12.315	110.11
Menzo Dodge	1972	Buick	GS	12.582	109.84
Jeff Wilkins	1970	Ford	Cobra	12.615	109.24
George Krem	1964	Studebaker	Challenger	12.741	112.20
Larry Weymouth	1971	AMC	Hornet	13.074	107.74
Rhonda Clary	1969	Oldsmobile	Cutlass	13.488	101.35
Rick Van Eck	1969	Mercury	Cougar Eliminator	15.197	89.65

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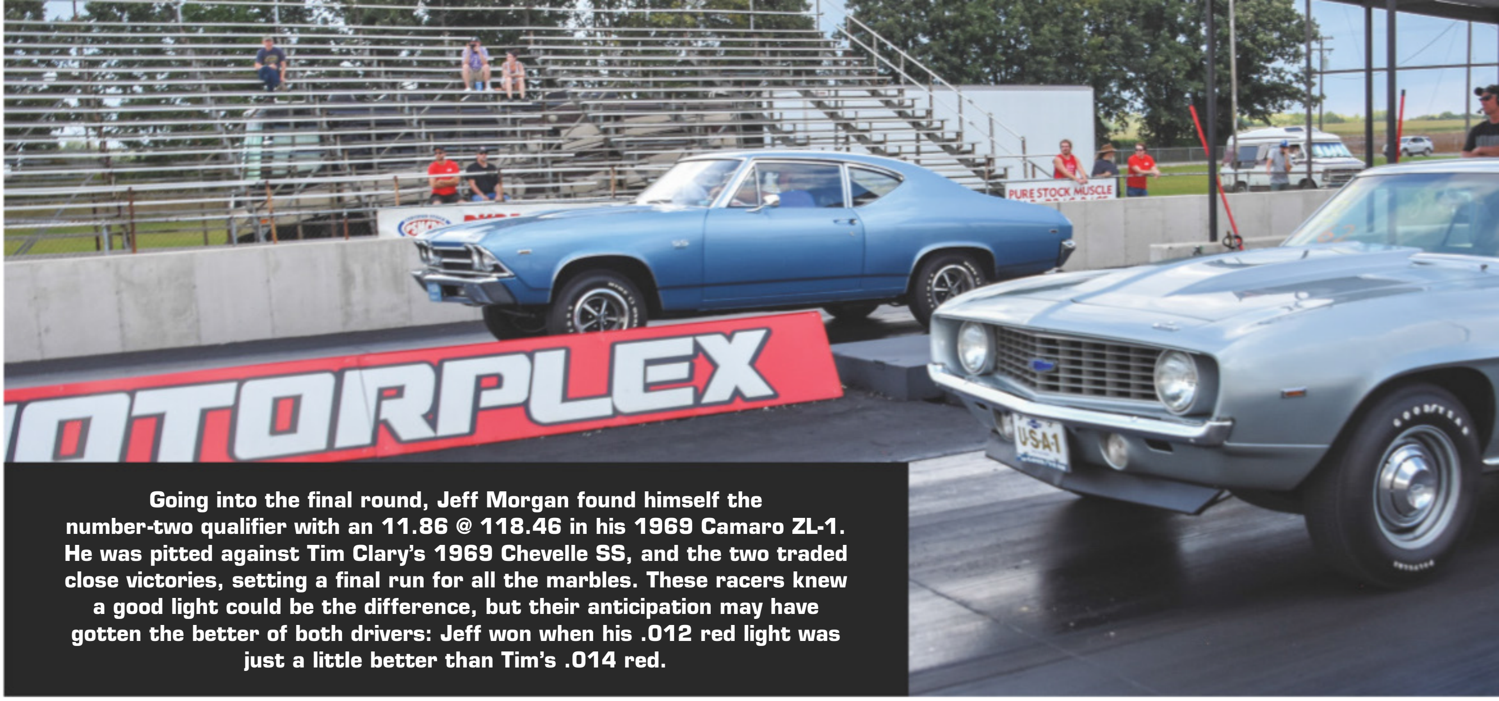
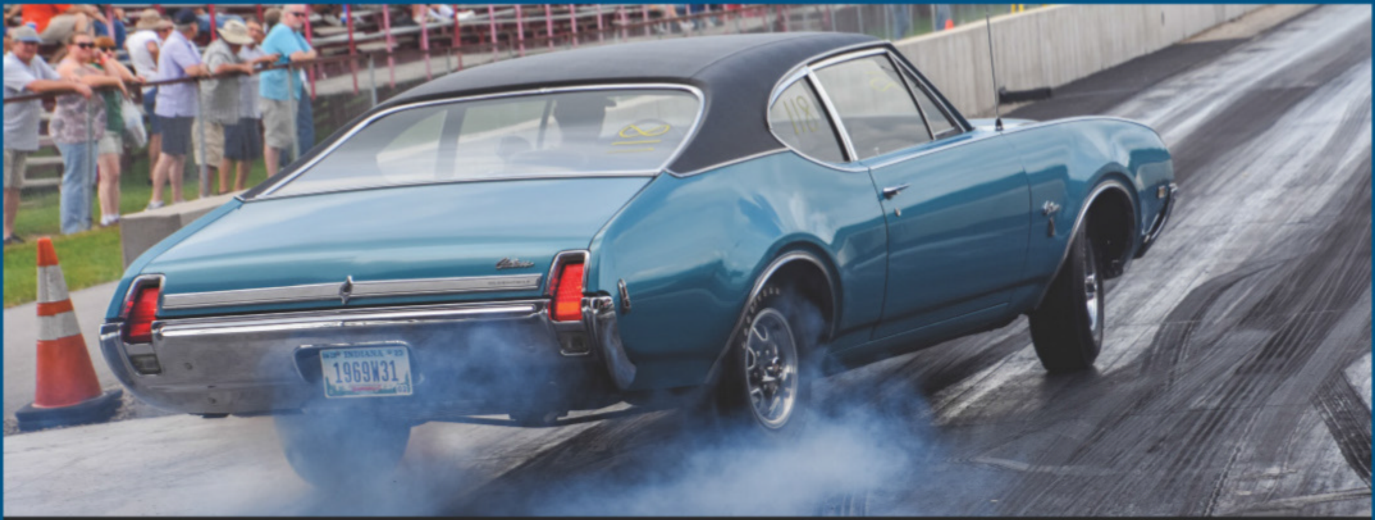


Going into the final round, Jeff Morgan found himself the number-two qualifier with an 11.86 @ 118.46 in his 1969 Camaro ZL-1. He was pitted against Tim Clary's 1969 Chevelle SS, and the two traded close victories, setting a final run for all the marbles. These racers knew a good light could be the difference, but their anticipation may have gotten the better of both drivers: Jeff won when his .012 red light was just a little better than Tim's .014 red.

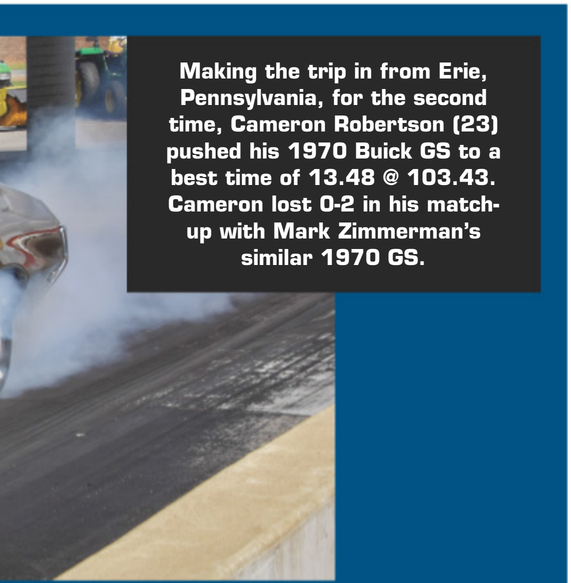
YOUNG GUNS

You might be tempted to think that, in this field of restored muscle cars, all the racers would be of the more mature generations. But rest assured—the future of the Pure Stock Drags is being passed to another generation of racers. Many of the seasoned racers can tell you that throwing the keys to a high-powered muscle car to a young, aspiring racer is pretty gratifying and sharing the track with them is even better. We're turning the spotlight on some of the newer members of the PSD racing community.

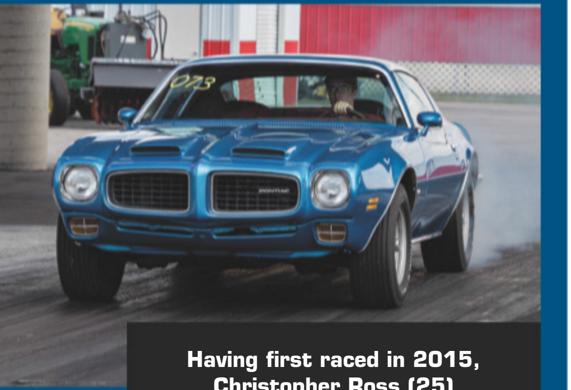


Making his debut in his beautiful 1969 Cutlass, Chad Fraser (21) posted a best of 13.71 @ 103.47 with the 350-equipped Olds. After earning a match-up against Dave Hemker's 1968 Buick GS 400, Chad lost in two straight—but very close—races.

MID MICHIGAN MOTORPLEX



Making the trip in from Erie, Pennsylvania, for the second time, Cameron Robertson (23) pushed his 1970 Buick GS to a best time of 13.48 @ 103.43. Cameron lost 0-2 in his match-up with Mark Zimmerman's similar 1970 GS.



Having first raced in 2015, Christopher Ross (25) has been running his 1973 Firebird Formula since 2017. The 455-powered four-speed Firebird clocked a best of 14.09 @ 102.28. Christopher overcame a red-light loss in round one to defeat Tony Rosendaul's 1969 GTO.

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When she is not presenting at the Muscle Car and Corvette Nationals, Adrianna Straub (25) can be found with a helmet on and her foot on the floor. Turning a best time of 13.70 @ 101.68, she piloted her 1970 4-4-2 to a 2-0 shootout win over Brad Rising's 1964 GTO.

In four years of running his 1970 Buick GS, Corey Peterson (23) had never failed to post a 12-second run, and has a sterling 4-0 record in his shootouts. This year he posted a best of 12.94 @ 107.30 and a 2-0 win over Brad Bach's 1971 Buick GS.

With 180 horses from the factory, a 1978 Camaro Z28 was hardly a screamer. But with the rules allowing 1.5 points of extra compression and a true dual exhaust, more potential is unleashed, allowing Cam Miller (16) to run 13.89 at 99.38. Cam also posted .000 and .001 lights during his shootout.

Corvettes run deep in the Brass family, so it was no surprise when Mike Brass (25) chose a 1970 Corvette LT-1 to race. Mike powered to a 12.72 @ 107.44 during his 2-0 win over Chris Teed's 1968 Nova SS.

This year, Caroline Straub (17) replaced her 1972 Dodge Demon with a much quicker 1972 Duster 340. Nearly breaking into the 12's with a best of 13.01 @ 106.73, she earned top honors in the Straub family of racers. Caroline lost her shootout 0-2 to Alana Beltrame in her 350-powered 1969 Camaro SS.

When you line up against the 1969 Camaro SS of Victoria Waligora (22), know that you will be waiting on her to first finish a four-alarm burnout; then she'll be waiting for you at the finish line. With a best of 12.69 @ 110.21, Victoria swept Dave Watt's 1971 Duster 340 to run her record to 5-0 in the shootouts. ■

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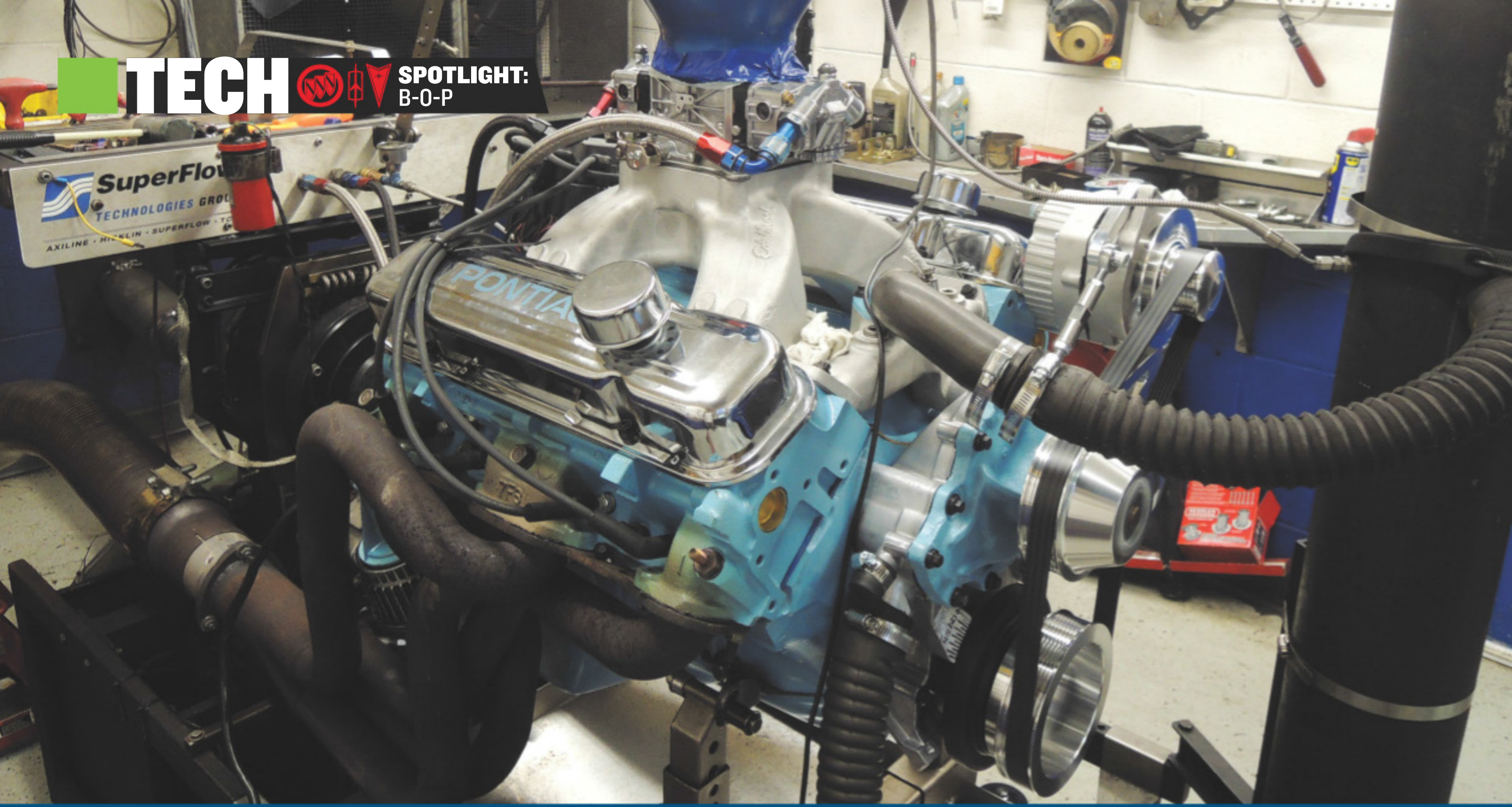

BRAWN ON A BUDGET

BUILDING BIG TORQUE FROM A LOW-COMPRESSION, PUMP-GAS PONTIAC

WORDS AND PHOTOGRAPHY BY CHUCK HANSON

THERE'S CONSIDERABLE CONSENSUS THAT the muscle car era reached its peak in 1970. After that, it seemed the government and insurance companies actively conspired to bring the fun to a halt. Tamed engines outfitted with additional smog equipment were deemed necessary to save the planet, while rising insurance premiums on performance machines sought to save corporate profits… and maybe to save us speed demons from ourselves.

With few exceptions, compression cuts, more conservative camshaft profiles and ignition curves, and other rudimentary emission stopgaps were put into effect across the board by auto manufacturers as they yielded to government mandates. And as any gearhead worth his or her chrome valve covers already knew, these changes resulted in lower performance and higher fuel consumption as the compromised engines struggled to maintain combustion efficiency.

Pontiac had long been touted as GM's performance division, and its plan to retain that revered position during those transitional times was to drop the compression but keep the cubes. The result was the creation of several notable pump-gas friendly, big-inch engines that may have lacked the impressive horsepower numbers, but generated tons of torque to get the job done. Informed mechanical minds acknowledge without equivocation that torque is what moves mass; in performance circles, the name of the game is to get it moving quickly and maintain it in a state of forward momentum. Certainly, the 455 H.O. is a great example of Pontiac's intentions.

When first introduced for 1971, the 455 H.O. featured four-bolt mains and a cast crank, rods, and pistons. A Q-jet on a two-piece aluminum intake manifold fed the beast, while the heads featured larger intake ports than the standard 455 paired with Pontiac's "round-port" exhaust outlets, seen previously on the Ram Air II and Ram Air IV 400 engines. Free-flowing cast-iron exhaust manifolds fed dual exhaust and compression was pegged at just 8.4:1, allowing it to run on the coming regular unleaded fuel.

The initial offering of the 455 H.O. had a gross rating of 335 hp at 4,800 rpm and 480 lb-ft at 3,200 rpm. For '72, the 455 H.O. was carried over without any significant changes, but the horsepower rating was now presented in net terms: 300 hp at 4,000 rpm and 415 lb-ft at 3,200 rpm. And even though it saw only two years of production, Pontiac illuminati still consider the 455 H.O. the most versatile street engine Pontiac ever produced.

Essential to the '72 455 H.O. engine's success were the "7F6" cylinder heads that provided airflow in and out of the engine. Breathing improvements were further enhanced by the "open" combustion chambers that gave the valves even more room to inhale refined fossil fuels and spit out combusted hydrocarbons. When approached with today's fastidious machining practices and the introduction of a bit of modern technology, this factory package can become an even more robust performer.

Although the heads are already capable of flowing prodigious amounts of air in stock form, enhancements in the form of a three-angle valve job, judicious pocket porting, and stainless valves with undercut stems further improve the flow numbers. Adding a more aggressive camshaft and related valvetrain components that complement the heads' capabilities also makes sense, and the package is completed by shuttling the factory manifold and Quadrajet carb and replacing them with an intake of updated design and topping it with a Holley fuel mixer.

So, how responsive is the 455 H.O. to those technological updates? We recently found out by following the rebuild of a customer's otherwise stock example at a performance machine shop, Tommy's Auto Machine, in Springfield, Tennessee. There, engine man Frank Ofria applied his considerable expertise to the machining and assembly of the low-compression engine, hoping for an appreciable gain in output without compromising its street manners or ability to operate on fuel of the lowest grade, straight from the pump nozzle.

BLOCK PARTY

The foundation for the build began with a customer-supplied '72 455 H.O. block, crank, rods, and heads, with instructions to transform it into a reliable yet powerful engine, willing to operate on 88 octane (or lower) and the ability to undertake a cross-country cruise without toting a load of octane booster. And just to keep things interesting, all this was to be accomplished with an eye towards the owner's conservative budget.

A quick trip through the Summit online catalog allowed easy improvements with new hypereutectic pistons, upgraded rod bolts, and a street-oriented hydraulic flat-tappet cam, along with fresh lifters and pushrods. Since the original aluminum intake and Q-jet were not part of the delivered componentry, the induction package was upgraded to a current design aluminum intake and a vacuum-secondary carburetor.

Before commencing with the build, the block was validated with a Magnaflux test to ensure its structural integrity, then decked and squared to make sure that everything was dimensionally optimized. A previous .030-inch overbore was found to be out of spec, so the boring bar removed another .030-inch to clean things up, bringing total displacement to 469 cubic inches.

The bottom end remains largely stock since the block was fitted with four-bolt mains from the factory, and the

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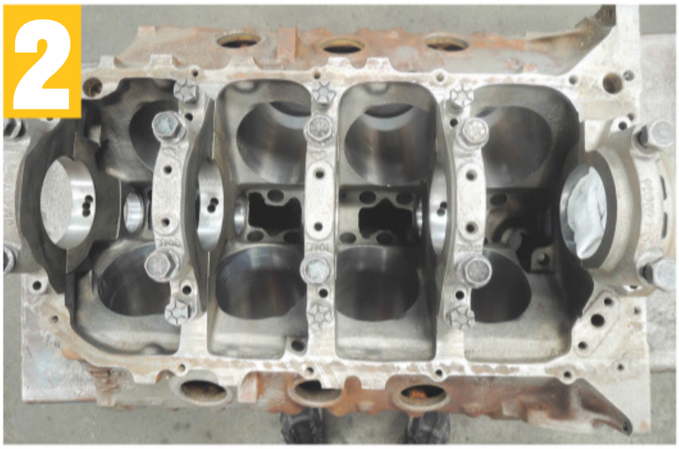

1. The 455 casting on the passenger side of the block makes it easy to identify. First seen in 1970, all Pontiac 455 blocks through 1974 were drilled and tapped for four-bolt mains from the factory, whether they came with the matching caps or not. The two-bolt main blocks are easily upgraded with aftermarket billet four-bolt caps.
2. The 455's strong bottom end features beefy main webs and four-bolt main caps on the center three positions. The caps are also drilled and tapped to mount a windage tray.
3. All 455 H.O. cranks were cast from an Armasteel alloy, which Pontiac felt was more than capable of carrying the load. After chamfering the oil holes, the crank was ground .010/.010-inch (rods/mains) undersize, then polished and given a fastidious bath in the parts cleaner. 4. Keeping the rear seal tight and dry is ensured with the prudent application of RTV along the lip that mates to the block.

rods were put back in service after correcting their factory center-to-center specs and outfitting them with ARP bolts. Pistons were also selected from the Summit site, with the choice going to a set of KB 371+.060-inch hypereutectic slugs that will serve quite adequately since the engine wasn't intended for high-rpm, severe-usage duty.

HEAD GAMES

Sealing the top of the cylinders to contain combustion is but one responsibility of the cylinder heads. They also contain the intake and exhaust ports as well as the valves that regulate the airflow in and out of the engine. The typical cylinder head contains more moving parts than any other major component of the engine.

With such a crucial role to play, it stands to reason that any attempt to improve the efficiency of a cylinder head has the potential to yield significant power gains.

Nominal combustion-chamber volume for the 455 H.O. head is 108 cc. This can be reduced incrementally through normal resurfacing of .020-inch, which also restores the flatness of the mating plane and provides a superior surface for gasket sealing. Both heads benefitted from a .025-inch cut.

Once the heads were deemed suitable for further improvements, the port bowls were opened up with a bit of hand porting before the heads were transferred to the Serdi seat- and valve-grinding machine for a precision three-angle valve job. The intake and exhaust ports were otherwise left untouched and considered adequate for this relatively mild street-oriented engine.

With the machine work accomplished, the heads were filled with stock-sized 2.11/1.77-inch (intake/exhaust) Ferrea stainless valves with undercut stems. Holding them in place is a set of Comp Cams valve springs, retainers, and locks, while pushrod guide plates enhance valvetrain stability.

CREATING A CAM-MOTION

Having a free-flowing set of heads won't do you much good if the camshaft and related hardware aren't capable and compatible. While a roller valvetrain would have certainly provided a significant step forward in terms of technology and reliability, the budgetary nature of the build precluded its inclusion. Instead, a hydraulic, flat-tappet cam was selected from the Comp Cams catalog, along with the appropriate lifters, pushrods, and springs.

There really are no significant shortcomings with the implementation of a flat-tappet cam; they've been used successfully for decades in millions of engines. And when installed properly and the recommended break-in procedure is followed, reliable operation can be expected for the life of the engine. After checking the cam specs with a degree wheel, it was installed straight up.

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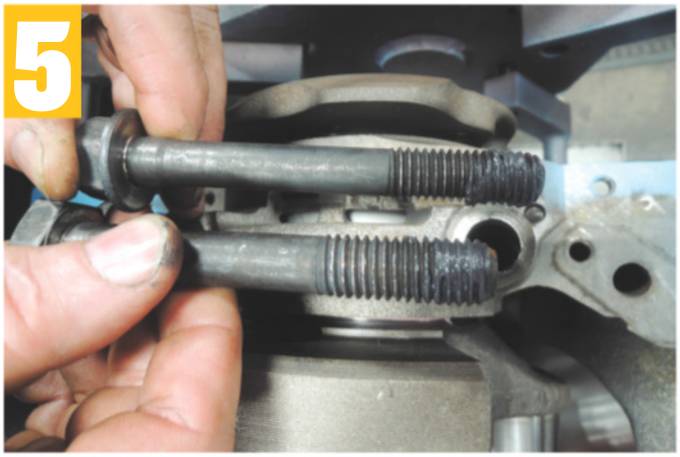

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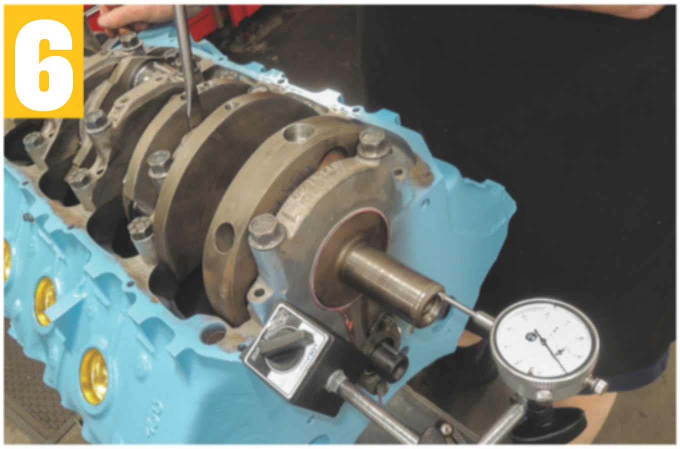

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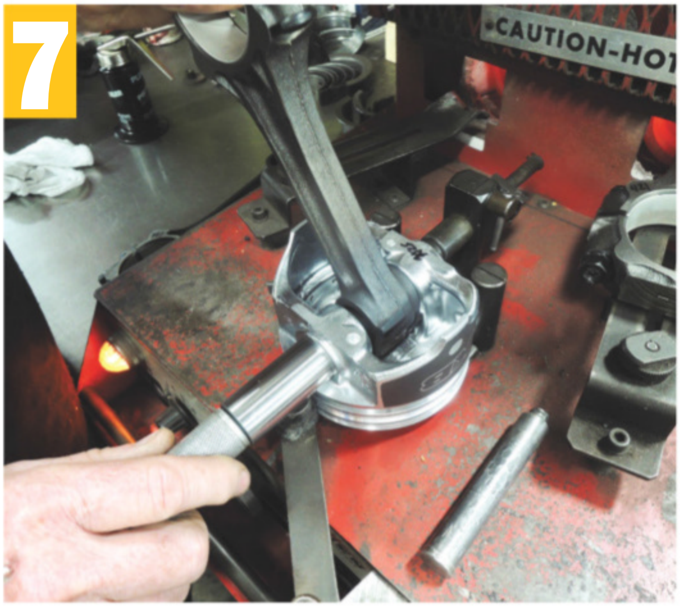

5. **Two different sizes of bolts are used to secure the main caps: a pair of 9/16-inch bolts on the rear main, and half-inchers on the rest. They are torqued to 120 and 100 lb-ft respectively; ARP bolt lube assures accurate torque readings.** **6.** **Crank thrust is the responsibility of the center main bearing, and the dial indicator showed .004-inch, falling nicely within the factory specifications of .0035- to .0090-inch.** **7.** **After re-establishing the connecting rods' correct center-to-center distance, they were fitted with ARP ⅜-inch bolts before the wrist pins were pressed into place in the KB pistons.**

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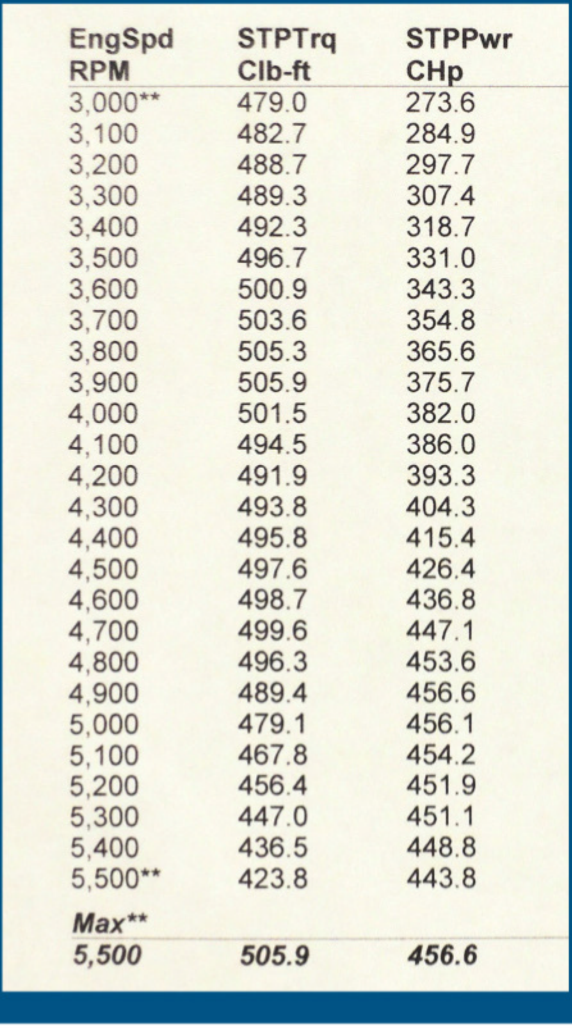
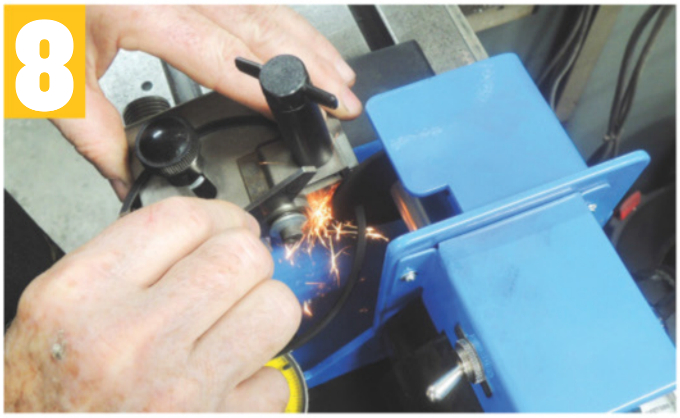
TRUTH AND CONSEQUENCES

Keep in mind this was a low-budget, low-compression build, so we held no outrageous expectations. Still, the results were quite impressive, especially when considering the fundamental approach taken to gain power without losing tractability. Better yet, the lack of exotic internal hardware makes duplicating this pump-gas Pontiac well within the realm of reality, especially for those with a conservative budget. And, just to validate the 455's parts selection and its pathway to power, we strapped it to the dyno. Take a look at the numbers:



EngSpd RPM	STPTrq Clb-ft	STPPwr CHp
3,000**	479.0	273.6
3,100	482.7	284.9
3,200	488.7	297.7
3,300	489.3	307.4
3,400	492.3	318.7
3,500	496.7	331.0
3,600	500.9	343.3
3,700	503.6	354.8
3,800	505.3	365.6
3,900	505.9	375.7
4,000	501.5	382.0
4,100	494.5	386.0
4,200	491.9	393.3
4,300	493.8	404.3
4,400	495.8	415.4
4,500	497.6	426.4
4,600	498.7	436.8
4,700	499.6	447.1
4,800	496.3	453.6
4,900	489.4	456.6
5,000	479.1	456.1
5,100	467.8	454.2
5,200	456.4	451.9
5,300	447.0	451.1
5,400	436.5	448.8
5,500**	423.8	443.8
*Max***		
5,500	***505.9***	***456.6***



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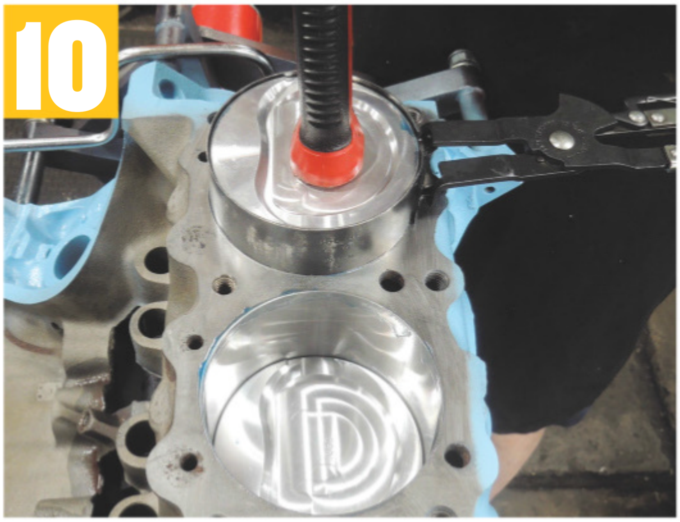

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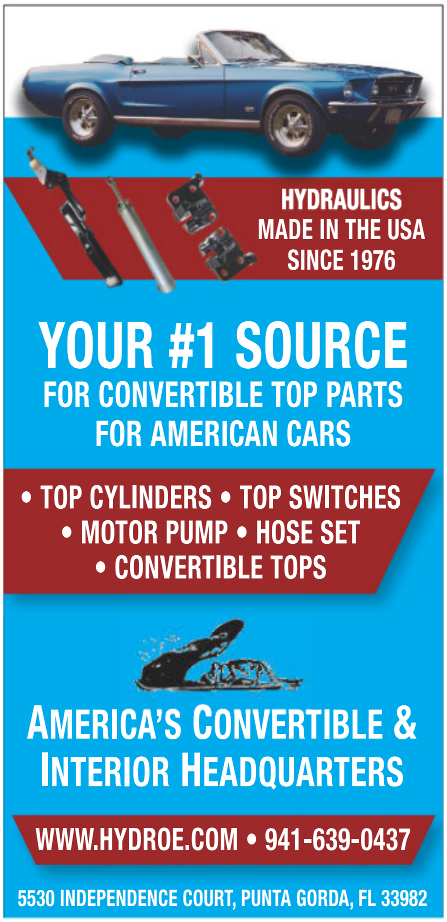
8. **Proper ring gaps are essential to good cylinder sealing, and the Hastings moly rings were set at .027-inch (top) and .020-inch (second) with the oil rings set at .018-inch. 9. The pistons are .060-inch overbore Keith Black (KB) hypereutectic pieces. Initial start-up lubrication is critical to life expectancy, so Ofria gives each one a liberal douse with Total Seal piston assembly lube before sliding them into the bores. 10. With a .060-inch overbore, the 455 was maxed out as far as the recommended safe limit, which brought the displacement out to 469 cubic inches. The pistons' reverse dome displaces 30 cc, lowering the effective compression ratio to just over 8.0:1. 11. ARP rod bolts are torqued to 50 lb-ft; be sure to lube the threads for an accurate reading. The "N" on the first crank throw indicates the nodular iron material it's cast from.**

11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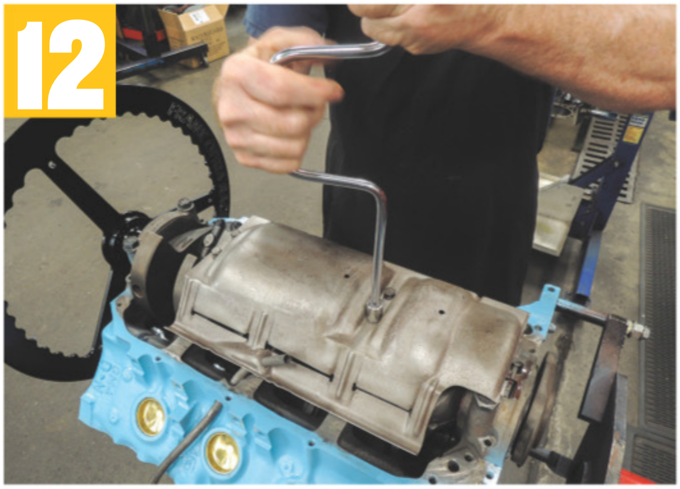
12. **A factory windage tray helps mitigate parasitic power loss by keeping the oil from winding itself around the crank. Also note that it's essential to correctly position the dipstick tube in the tray for the same reason.**
13. **Because the 455 H.O. was destined primarily for street duty, a standard volume and pressure Melling (M-54-D) oil pump was affixed to the block once the pickup was welded to the pump body.** **14.** **Adding some attitude to the Pontiac was a responsibility relegated to a Comp Cams Thumper camshaft (245/249 degrees @ .050-inch lift; .490/.475-inch lift, intake/exhaust) and related components. A set of Harland Sharp 1.5:1 HD roller rockers move the valves off their seats.**

12



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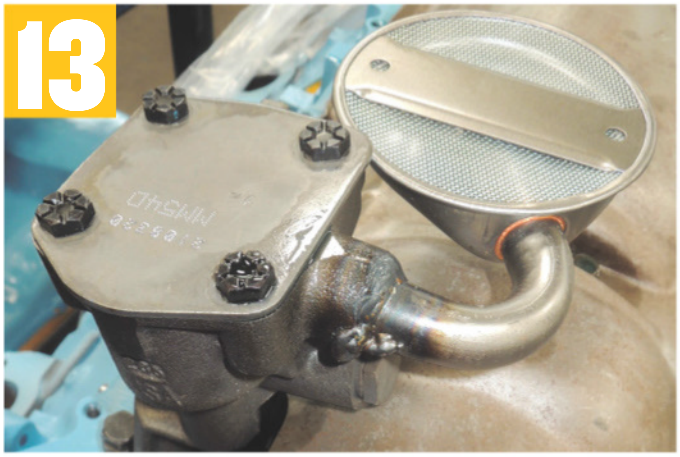

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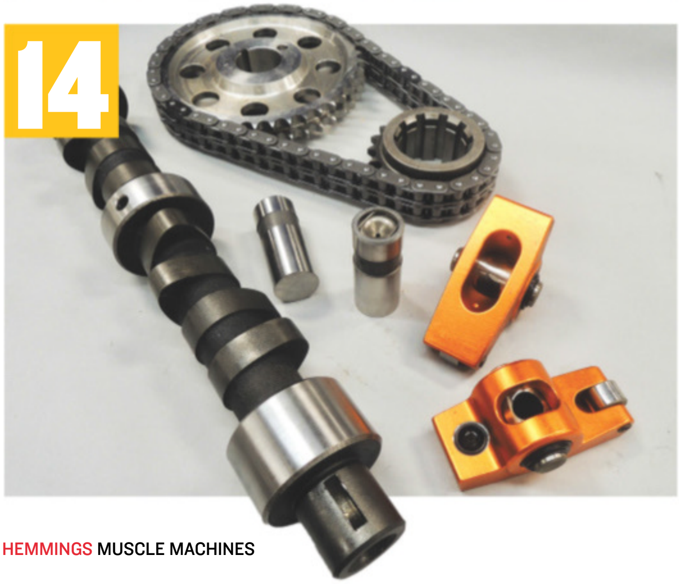

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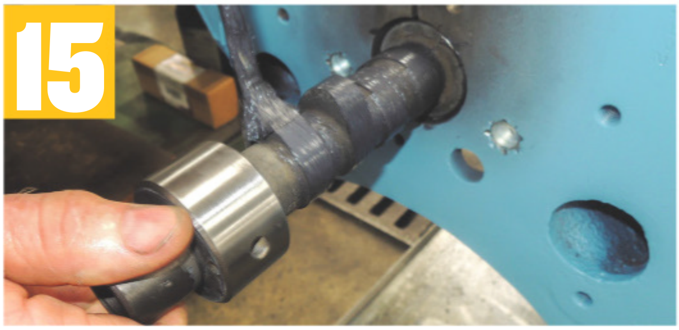

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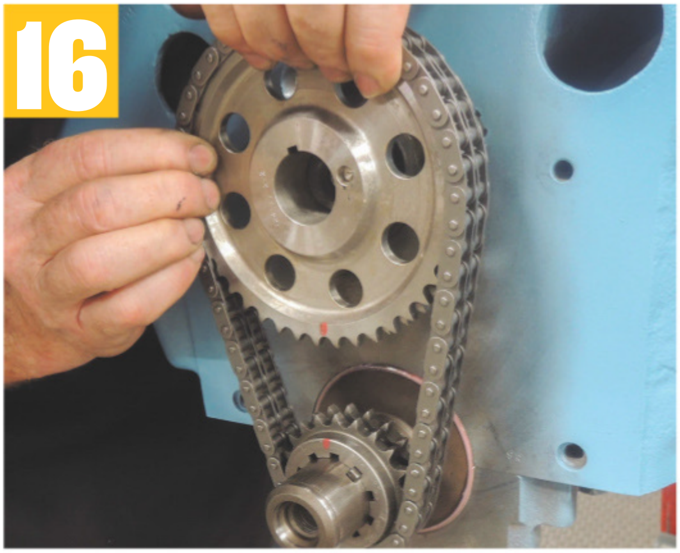
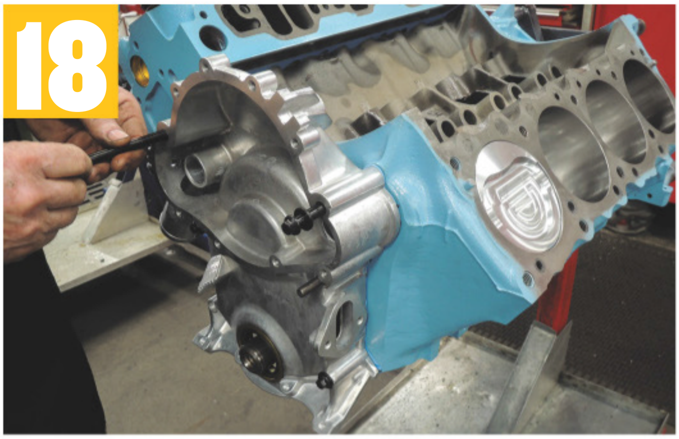


15. **Flat-tappet cams have endured some pointed criticism in recent years, and though remedies have been put into effect, careful adherence to the manufacturer's installation and break-in procedures, plus a generous application of the recommended lubrication, is crucial to the cam's longevity.**
16. **A Cloyes billet-steel roller timing set provides the option to advance or retard the cam timing and consequently move the power band around to optimize it for the application. The cam in this engine was initially installed with the stock timing marks lined up.** **17.** **The Thumper cam has a lobe separation angle (LSA) of 107 degrees, which helps generate low-end torque. After degreeing the cam and finding it within timing spec, it was left installed straight up.**

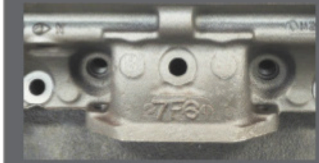
17

18. **Many original Pontiac cast-aluminum timing covers aren't reusable because of corrosion in the water passages; reproductions are readily available because of that shortcoming. A new timing cover had to be sourced anyway since one wasn't provided with the owner's original parts.** **19.** **Like the timing cover, reproduction oil pans are plentiful and virtually indistinguishable from stock. Fel-Pro gaskets seal it to the block while ARP bolts ensure it stays put.** **20.** **For decades, Fel-Pro gasket sets have been used in engine builds because of their rock solid reliability and affordability. PermaTorque composition head gaskets help contain cylinder pressure and have a compressed thickness of .039-inch.** **21.** **An assembled 7F6 head is about to be mated to the 455 block, giving us a good look at the enlarged intake ports. Head bolts were sourced from ARP, and the half-inch bolts were cinched down to 100 lb-ft.**

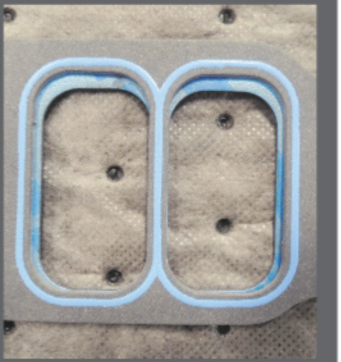


HEADS UP!

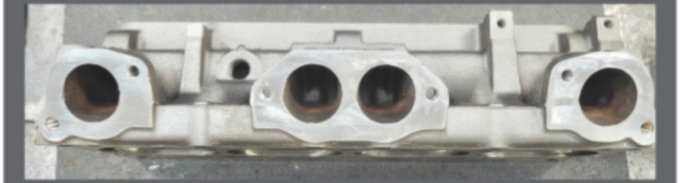
No doubt, the 455 H.O. heads were designed to flow massive amounts of air though the engine; it's a fundamental concept essential to good power production. Yet, the factory left room for improvement. While the open-chamber design allows the valves to operate in an environment conducive to improved airflow, it also lowers the compression ratio substantially. But there are ways to compensate for the lost squeeze factor.



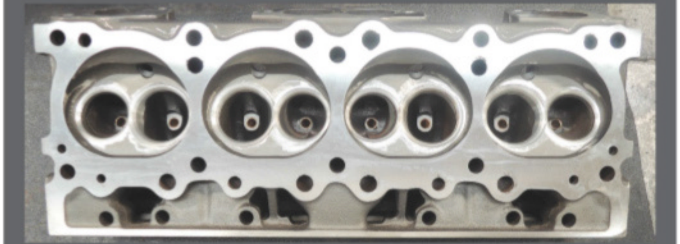
The '72 455 H.O. heads used for this build are easily identified by the "7F6" casting above the center exhaust ports. But don't expect to find them lying around in a pile of rusty engine parts; they're rare, and expensive, too, if you're fortunate enough to run up on a pair.



The enlarged intake ports of the H.O. engine are visibly taller and wider than the standard 455 head, as this gasket overlay shows.



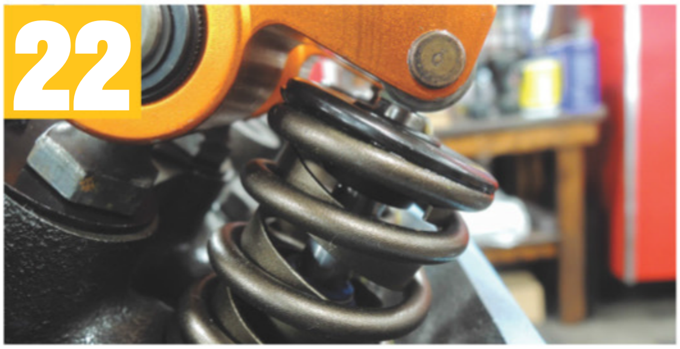
Round, sewer-pipe-sized exhaust ports, and a great short-side radius in the port, ensure that even enlarged versions of the 455 will be able to breathe with nary a constraint.



Nominal combustion chamber volume of the 7F6 head is 108 cc; the .025-inch surface cut brought it down to 103 cc for a slight compression bump. The intake and exhaust ports benefitted from some work to the bowls and the chambers were de-burred before the grinder was put away. A three-angle valve job was relegated to the Serdi machine.

Once the machine work was completed, the heads were filled with Ferrea stainless, undercut valves (2.11/1.77-inch) that are supported by Comp springs and hardware.

22



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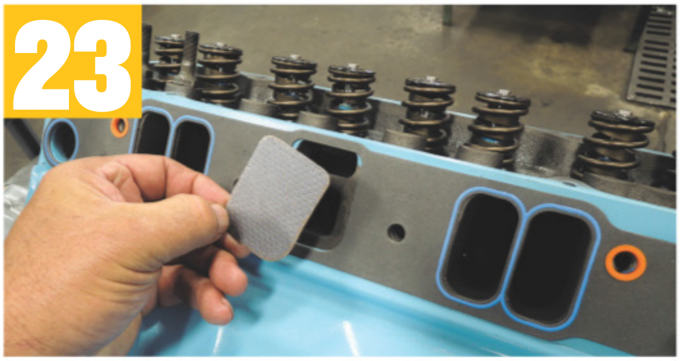
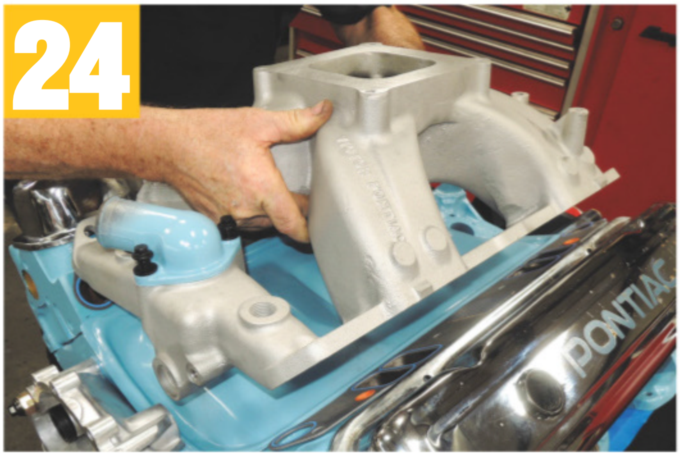


22. **Stock-length 5⁄16-inch pushrods were used in conjunction with the Harland Sharp 1.5:1 rockers. The roller tip remained centered on the valve stem, confirming proper rocker arm geometry.** **23.** **The Edelbrock intake the engine owner chose isn't designed for cold weather operation, so the cylinder head heat risers are blocked off with these fillers that are part of the Fel-Pro 455 H.O. gasket kit.**
24. **The Edelbrock Victor single-plane intake may not have been the best choice for street operation, but supply chain disruptions limited the choices. It probably cost a bit of low-end grunt but extended the torque range another 500 rpm. Not a bad trade-off, really, but an Edelbrock Performer #3701 will likely replace it once they become available again.**
25. **Fully assembled with a ready and reliable Holley #3310, 780-cfm carb straddling the Edelbrock intake and a billet accessory drive system from CVF Racing, the 455 H.O. is ready to apply its force to the SuperFlow 901 dyno.** ■

24



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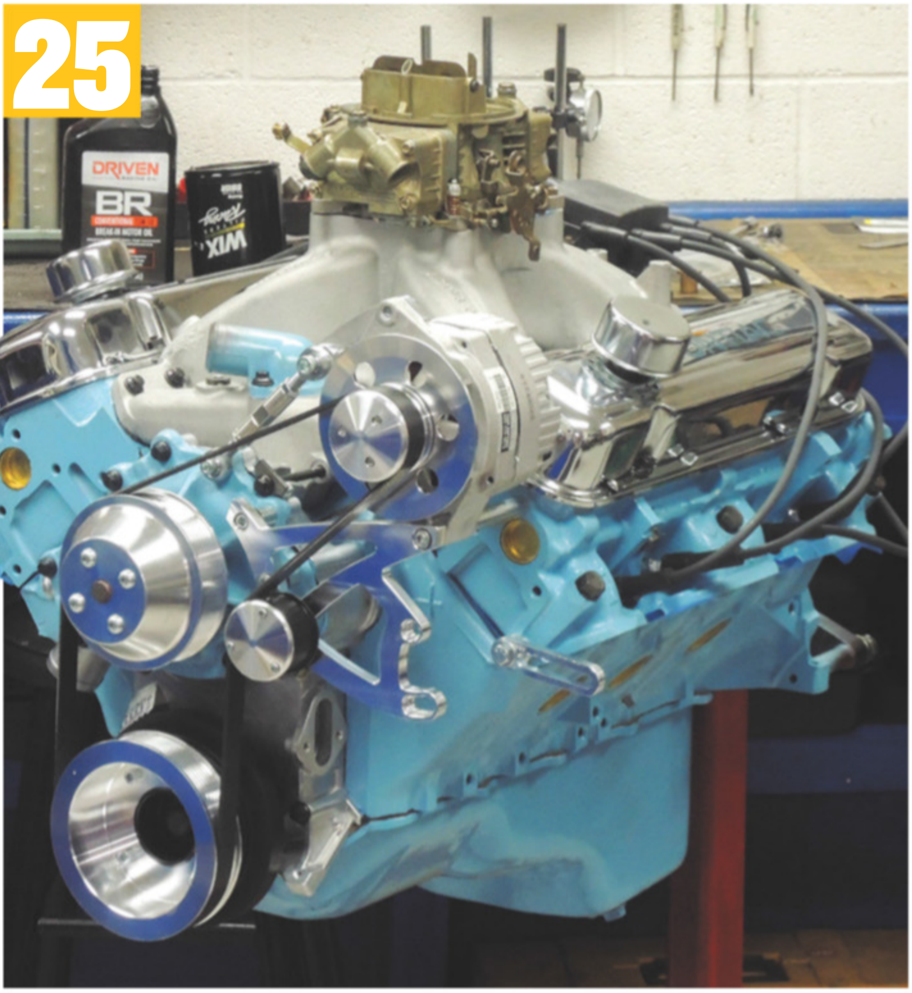

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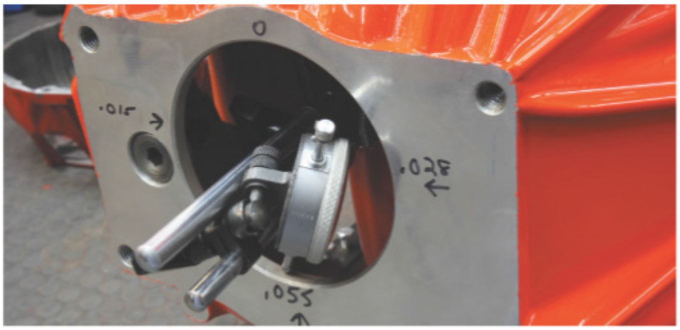

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ASK RAY

By Ray Bohacz

E-85 COLD START

Q: I have a 2015 Silverado with 110,000 miles on it. Due to price of fuel, I have been using E-85 for about five months. It costs me about 2-3 miles per gallon in mpg, but seem to have plenty of power. Lately, when the temps are lower in the mornings (22-23 degrees F), the truck seems to need to crank over more before firing off. My question is, will I be able to use E-85 all winter in Iowa, or could new plugs and wires help? I don't want to blend fuel. I'd appreciate your thoughts.

Merle Hoppenworth
Slater, Iowa

A: *Ambient temperature does affect how various fuels will perform. E-85 does not vaporize as easily as even E-10. In most parts of the country where E-85 is sold in the winter, it is a lower level of ethanol during the cold months, even though the pump still says E-85. The seasonal change in blend is made because of the fuel's inability to vaporize in the cold.*

As a farmer and supporter of ethanol, I recommend switching back to traditional gasoline for the winter and then, once the weather warms up, go back to the E-85 if you like. There is the potential of getting very cold in Iowa, and the few cents you save is nothing if the truck does not start. That is the real deal.

HOT STEERING

Q: I have really enjoyed your helpful column in the magazine for many years.

I have owned a 1969 Plymouth GTX 440-cu.in. with automatic for 22 years. This summer (early July) the power steering box and pump went out. My mechanic recommended an expensive aftermarket steering box and new pump. Once they were installed and that car was test driven, everything seemed to work properly. Then I took it for a 25-mile ride and smelled was I thought was hot plastic. When I looked, I found that the power steering fluid was so hot it had melted the stem of the cap and blew the cap half off. I returned to the dealership twice, each time purchasing a cap and having them replenish the synthetic fluid. Then I thought to drill holes in the top of the cap to release pressure, but that didn't work. Each time, the steering would work for a short while, then the fluid would heat up and blow out. The pump and fluid are so hot you can't touch any part of the system, and it becomes extremely hard to steer. I've talked with many mechanics and gearheads, and they've all suggested that possibly the pump may be weak or there may be some other blockage.

I need your help — I love to cruise and attend car shows, and to drive this car. I've already missed a lot of fun. Thanks for your expert advice and solutions.

Mike Beech
Houghton Lake Heights, Michigan

A: *Thank you for reading my column each month. It sounds as if the pump is cavitating and then boiling the fluid. I am surprised that you do not hear any noise, as that usually is created by cavitation. From my limited experience with hydraulics, it sounds like the system is working for the first few miles based on how often you turn the steering wheel, which determines the level of assist required. At some point, the fluid starts to boil and gas, and then it becomes superheated since the cavitation increases and the assist goes completely away.*

The good thing is that there is not much involved — a power steering system like yours is relatively simple. It most likely is a defect in the pump or a line, either pressure or return. In a hydraulic system, pressure- or return-side cavitation can occur. I would talk to the folks that made the pump and then go from there.

CHARGER REAR MAIN LEAK

Q: I really enjoy your "Ask Ray" column as it is so informative and applicable to everyone who wrenches. I own a 1970 Dodge Charger with a 383-cu.in. V-8 and TorqueFlite 727 automatic setup. Last year I had the engine pulled from the car and sent off to be refreshed. The short-block was pulled apart, cleaned, and then the cylinders were honed before it was reassembled with new bearings, piston rings, and all-new gaskets and seals. The crankshaft, rods, and pistons were cleaned and reused. I had a new billet rear main seal retainer installed with a split Viton rear main seal. During the reinstall I added aftermarket A/C and a throttle-body fuel injection system.

Upon firing it up, the rear main seal started to leak and has never stopped. It's pretty bad as I need to have a drip pan under the car to collect oil; I probably collected a couple quarts just sitting in my garage over the past six months, not to mention all that is lost driving around. There are no oil pressure issues, but it's terribly frustrating and messy for a fresh engine. The engine builder will not warranty the rear main seal. Short of having to take the entire thing apart and pull the engine, is there anything that can be done to fix the seal while still in the car? Thank you.

Earl Morse
Albuquerque, New Mexico

A: *Since the engine was apart, I am assuming that one half of the seal was installed while the crank was out (in the block) and then the other half was mounted in the retainer.*

There are a few wildcards here that include the machining and flatness of the new retainer, the fit of the seal in the retainer where they butt, and the procedure used. Also, I will assume that the seal and crank were well lubricated, so they did not experience a dry start. Many rear seals are ruined on startup due to a lack of lubrication. Another potential trouble area involves the engine possibly building crankcase pressure due to the incorrect flow rate and response PCV valve.

Based on the fact that the engine leaked immediately, the most likely cause will be one of the first areas I mentioned. It would take a little time for the crankcase pressure to build to the level that will push oil past the seal, but it is not impossible. You can try running the engine with the PCV out of its mooring but still connected to the vacuum hose and see what happens. That is probably a Hail Mary effort but is easy enough to try.

I hope that I am wrong, but you may need to pull the engine out and put it on a stand to see what is going on. But you must find the smoking gun, not just change the seal. I would then find someone with a run stand or put it on a dyno and run the heck out of it. You can tune it then, too! This way you can put it back in the car with confidence. If not, you may need to put it in with Velcro since it may have to come back out again.

You want this nightmare to end so you can enjoy your car. If it is going to leak, let that happen on the run stand or the dyno.

Thanks for the kind words and please let me know how you make out.

SHORT-SHIFTING TURBO 400

Q: Ray, my 1970 Nova with Turbo 400 automatic transmission shifts out of first gear almost immediately after stepping on the gas during normal street driving. As a result, I find myself accelerating mostly in second gear to get the car up to speed. If I stand on it from about 2,000 rpm from a standing start, the car will "wind out" in first gear fine, and also in second. But driving that way is obviously unacceptable for normal street use.

Here are the specs: Chevy big-block 454-cu.in. engine, TH400 auto transmission with 2,600-rpm stall converter, 10-bolt axle with 3.42:1 gears and Positraction limited-slip.

My question is, do I have to change the stall converter, or can I change the transmission shift points by adjusting the modulator and/or changing the weights and springs in the governor?

A couple of transmission repair shops have said I don't need to change the converter, but neither of them had a definitive answer on what to adjust. I've been told that adjusting the modulator only changes the firmness of the shift points, but I'm not sure if that's accurate. That leaves me with trial-and-error governor changes, which the shops don't want to tackle. I'm willing to do the job myself, but I don't want to change the converter or tear apart the governor without a clear idea on which way to go. What do you suggest?

John Jones
Via email

A: *No one wants to get involved with that sort of transmission issue because, even for an experienced calibrator, solving the problem is often a hit and miss proposition. What I mean by that is, you end up pulling the governor in and out 100 times, making small changes each time to see if the result is what you're trying to achieve. It winds up being a financial loss for the shop, and even then, they may never satisfy the customer. I stopped doing transmission calibrations when I had my shop for that reason.*

The torque converter is not an issue. If it were my car, I would talk to a company such as Trans-go. I used them in the past and they were excellent, but I have been out of that end of the industry for some time now. Tell them what you have along with the problem of it short shifting. Get their recommendations and then get the parts from them. In my experience, their transmission adjustment advice was usually very close to being right on the money. Follow what they tell you and the Nova should be within a few hundred rpm of the perfect shift points. If you are happy with it, you are done — from there, just enjoy the car.

Send your troublesome tech questions to: askray@hemmings.com
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SWAP MEET

By Jim O'Clair

GM MINI STARTER INSTALLATION

Q: I have a small-block Chevrolet 305-cu. in. engine and a 168-tooth flywheel. I am trying to get a mini starter for it. Many of the open-nose starters I have researched have a two-bolt, straight-across bolt pattern; however, my block uses a staggered two-bolt pattern. Do you have any idea why this is, or am I looking for the wrong application?

Tony Li
Via email

A: *For an open-nose starter, we would suggest you locate a Powermaster Powermax Plus 1.4-kw unit (#9112), which incorporates both the open nose and a three-bolt pattern, allowing you to use either installation set-up. A 2.2-kw unit is also available from Proform (#66267) for higher compression engines with the same three-bolt pattern. Powermaster units are available from many automotive retail suppliers, including Summit Racing Equipment. It's worth noting that some Chevrolet V-8 blocks are drilled to accept either a straight-across or staggered bolt pattern. You might also find that some starters used two long bolts or a long and short bolt, which is why a new straight bolt pattern mini starter usually includes two long bolts to replace the short bolt, or to allow the installer to use a new bolt in the straight-across bolt pattern.*

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4.3 V-6 FLYWHEEL BOLTS

Q: We are trying to locate new flywheel bolts for a V-6 Chevy pickup; however, a standard 7/16-20 fine-thread bolt has a hex head that is too tall compared to the old hardware for this application. The originals were 12-pointers with a more shallow head dimension. What is the danger in using an out-of-the-bin, grade 8, fine-thread bolt?

Curious George Abrahams
Via email

A: *The shallow 7/16-20-threaded, 12-point bolts are used to insure there are no clearance problems where the flywheel meets the clutch disc, so we would not recommend you use a standard bolt unless its head remains below the machined flywheel surface once installed. The correct bolts are available from Mr. Gasket or Holley (#912) from many retailers, or from your local auto parts store as Dorman #74069.*

JEEP TRANSMISSION COOLER FITTINGS

Q: Thanks for offering your nuggets of knowledge in *HMM* each month. I am replacing the rubber lines for the transmission cooler on my Jeep Wagoneer; however, the fittings are not a pipe thread or inverted flare thread, they are ⅜-inch SAE 45-degree. Are there female SAE adapters available that I can use that are barbed and fit ⅜-inch transmission hose on the other end?

Mike Valentino
Via hemmings.com

A: *Many fitting providers offer Weatherhead reusable brass fittings. Part #10006B-406 is ideal for this application. Hayden Transmission Coolers also offers an SAE installation kit (#391) that contains a pair of these same fittings. Hayden parts are available from Summit Racing and many other performance parts suppliers.*

CHEVROLET LS CROSS-RAM

Q: I am looking to upgrade my LS3 engine with a cross-ram aftermarket intake manifold. I'll be using the car mostly for the street, but track use may also be in its future. Is there a unit available that fits the bill for both uses? What size throttle bodies does it require?

Derrick Hobbs
Via email

A: *The best recommendation for this scenario would probably be the Edelbrock LS3 Cross Ram, which uses dual 92-mm throttle bodies. It has long (13-inch) runners and mates to LS3, L92, or L76 heads with rectangular intake ports. The cross ram's effective operating range is between 1,500 and 6,500 rpm, which makes it ideal for an everyday driver as well as a strip racer. The manifold is available in black (part #71413) or red (part #7141), and since Edelbrock's LS3 Cross Ram is so large, it basically covers the valve covers, which is why the designers added coil mounts to each side of the unit for ease of installation. For the throttle bodies, this manifold was designed with dual Holley Sniper 92-mm units in mind, but you will need an additional dual-throttle-body EFI controller to complete the installation. Edelbrock also has this base covered with its Pro 4+ EFI controller. AEM Electronics also offers its Infinity Series 8 EFI controller, which will work with this setup as well.*

AEM Electronics
310-484-2322 • aemelectronics.com
Edelbrock
800-416-8628 • edelbrock.com
Holley
866-464-6553 • holley.com

SPEEDOMETER SOLUTION

Q: I have a '72 Chevy C10 and I've swapped the original TH350 three-speed automatic to a later-model 4L60E four-speed automatic with overdrive using a Chevrolet Performance stand-alone control unit. As you know, the 4L60E uses electronic controls for shifting, and has no cable-drive output for a speedometer. I want to keep the stock gauge panel. Is there any way I can drive a stock, conventional speedometer electronically?

Tim Jones
Cleveland, OH

A: *You could send your stock speedometer out to a specialist to be converted to an electronic movement, or you could use a device like the Speedbox from Speedhut. This is a compact unit that can be mounted behind the dash or in the engine bay. It takes an electronic signal, either from an ECM (like your trans controller) or from its own internal GPS, and then uses that to control a cable drive output, which connects to a speedo cable that goes to your stock gauge.*

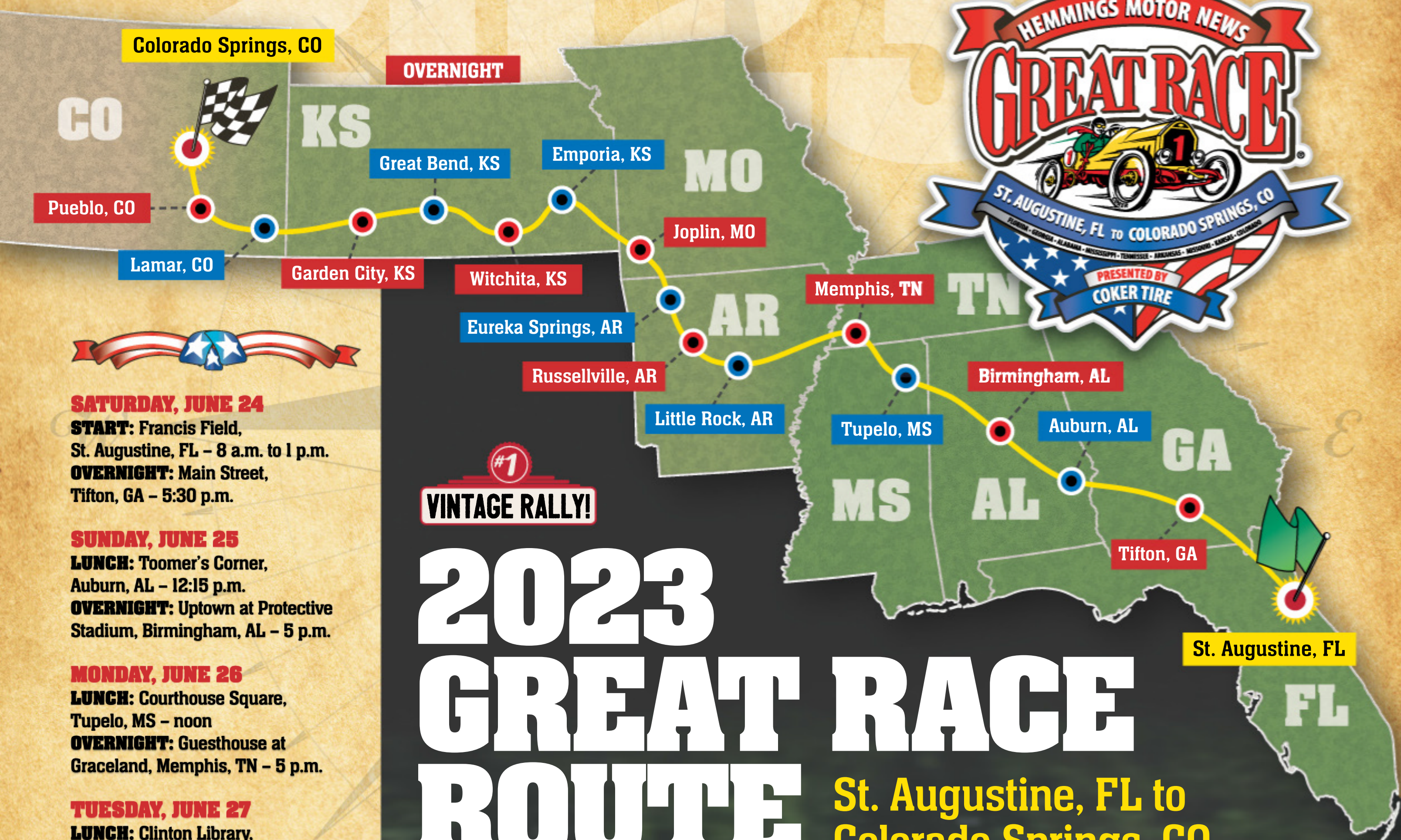
Speedhut
801-221-1460 • speedhut.com

All discussions in this column regarding repairs, conversions, parts swaps, etc. are offered as suggestions. Performing any such work should be accompanied by thorough research to verify proper parts compatibility and procedures to achieve a safe, functional result.

We welcome any and all questions related to suspension, brake, engine, differential and transmission upgrades.

Email us at swapmeet@hemmings.com or submit inquiries to our Facebook page, www.facebook.com/HemmingsNews or our website where comments can be made at the bottom of dozens of previous Swap Meet articles posted there.

2023
HEMMINGS MOTOR NEWS
GREAT RACE
ST. AUGUSTINE, FL TO COLORADO SPRINGS, CO
PRESENTED BY COKER TIRE


Colorado Springs, CO
OVERNIGHT
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Lamar, CO
Garden City, KS
Great Bend, KS
Witchita, KS
Emporia, KS
Joplin, MO
Eureka Springs, AR
Russellville, AR
Little Rock, AR
Memphis, TN
Tupelo, MS
Birmingham, AL
Auburn, AL
Tifton, GA
St. Augustine, FL

#1 VINTAGE RALLY!

2023 GREAT RACE ROUTE

St. Augustine, FL to
Colorado Springs, CO

June 24-
July 2, 2023

SATURDAY, JUNE 24
START: Francis Field,
St. Augustine, FL – 8 a.m. to 1 p.m.
OVERNIGHT: Main Street,
Tifton, GA – 5:30 p.m.

SUNDAY, JUNE 25
LUNCH: Toomer's Corner,
Auburn, AL – 12:15 p.m.
OVERNIGHT: Uptown at Protective
Stadium, Birmingham, AL – 5 p.m.

MONDAY, JUNE 26
LUNCH: Courthouse Square,
Tupelo, MS – noon
OVERNIGHT: Guesthouse at
Graceland, Memphis, TN – 5 p.m.

TUESDAY, JUNE 27
LUNCH: Clinton Library,
Little Rock, AR – 11:45 a.m.
OVERNIGHT: Russellville Depot,
Russellville, AR – 5 p.m.

WEDNESDAY, JUNE 28
LUNCH: Community Center,
Eureka Springs, AR – 12:15 p.m.
OVERNIGHT: Main Street downtown,
Joplin, MO – 5 p.m.

THURSDAY, JUNE 29
LUNCH: Commercial Street,
Emporia, KS – noon
OVERNIGHT: Old Town,
Wichita, KS – 5 p.m.

FRIDAY, JUNE 30
LUNCH:: Courthouse Square,
Great Bend, KS – noon
OVERNIGHT: Main Street at Stevens
Park, Garden City, KS – 5 p.m.

SATURDAY, JULY 1
LUNCH: Colorado Welcome Center,
Lamar, CO – 11:45 a.m.
OVERNIGHT: Pueblo Union Depot,
Pueblo, CO – 5 p.m.

SUNDAY, JULY 2
FINISH: Tejon Street,
Colorado Springs, CO – 1 p.m.

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Hemmings
HAGERTY Drivers Club
COKER TIRE Wheels Too!
McCollister's Auto Transport
ROGO FASTENER CO., INC.

GEAR

By Mark J. McCourt

*Prices shown are presumed accurate at the time of printing.
Please confirm with seller prior to purchase.

AMERICAN MUSCLE CAR EVOLUTION
EUROGRAPHICS
PUZZLE
1000

AMERICAN MUSCLE CAR EVOLUTION JIGSAW PUZZLE

SUMMIT RACING EQUIPMENT • 800-230-3030 • SUMMITRACING.COM • $18.99

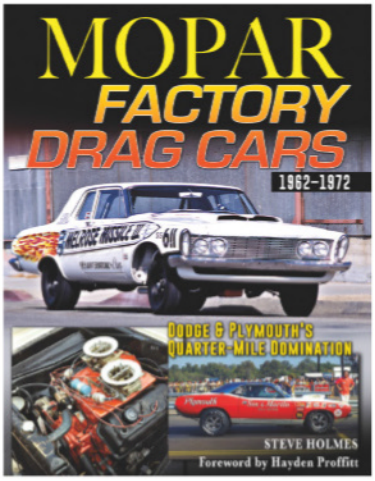
There's something relaxing and pleasantly contemplative about working on a jigsaw puzzle. And when the subject of said contemplation involves the history of muscle cars, it's even better! Summit Racing Equipment offers this 1,000-piece American Muscle Car Evolution puzzle (item EUR-6000-0682) that, when finished, spans 26½ x 19¼ inches. As you put it together, you'll see how American performance cars evolved from the early postwar Oldsmobile Rocket 88 V-8 through the "banker's hot rod" Chrysler 300, and into the popular intermediates and hottest pony cars of the 1960s, 1970s, 1980s, 1990s, and 2000s. Key examples of GM brands (Buick, Chevrolet, Oldsmobile, and Pontiac), Mopars (Chrysler, Dodge, and Plymouth), and Fords are highlighted with striking color photos and important power and performance statistics. Once assembled, this puzzle is suitable for framing and display.

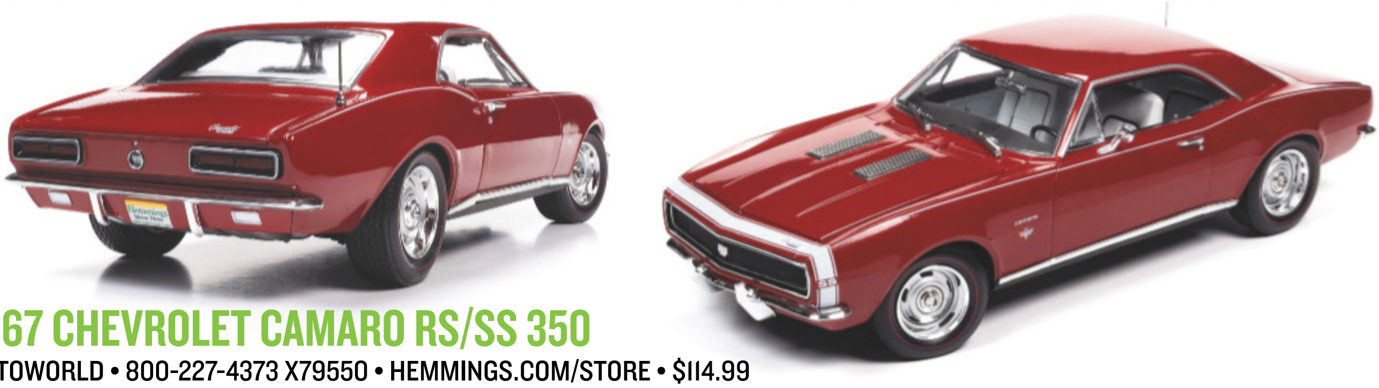
MOPAR FACTORY DRAG CARS 1962-1972

CARTECH • 800-551-4754 • CARTECHBOOKS.COM/CT688 • $36.95

There was a dazzling decade when the products of the Chrysler Corporation were deeply dominant in stock-based drag racing. Those pre-emissions control, pre-safety years when muscle cars came in all shapes and sizes saw Dodges and Plymouths taking on, and regularly beating, the industry's best. Mopar engineers created legends with the 413-cu.in. Long Ram, RB-based 426-cu.in. Max Wedge, and later, the iconic 426 Hemi V-8s. This new 176-page softcover (ISBN 9781613257227) from CarTech tells the story of those factory-backed racers with exciting detail.

From Super Stock to Pro Stock, racing historian and author Steve Holmes leads readers on a chronological tour through Chrysler's factory efforts, starting with a historical overview of the corporation's involvement in speedway racing. Each subsequent chapter highlights a year of this period and covers the changes in the cars, changes in the rules, and the results from key events. More than 400 color and black-and-white images illustrate those pages, which are enhanced with informative sidebars and captions. If you remember names like the Ramchargers and Golden Commandos, Dick Landy, Sox & Martin, and more, you'll enjoy this nostalgia-inducing book.





1967 CHEVROLET CAMARO RS/SS 350

AUTOWORLD • 800-227-4373 X79550 • HEMMINGS.COM/STORE • $114.99

The Super Sport package added real performance to Chevy's new Camaro for 1967, bringing a 295-hp, dual-exhaust, four-barrel-topped 350-cu.in. V-8 to the party along with a faux-vented hood, nose stripe, and lots of SS emblems. The Rally Sport package added more fresh style with hideaway headlamps behind a full-width grille, plus special parking lamps and taillamps. Together they made the ultimate regular-production Camaro. This 1:18-scale die-cast replica pays tribute to the stunning Bolero Red over white RS/SS 350 that graced the cover of sister publication *Hemmings Motor News* in March 2014. Built by the experts at AutoWorld, the officially licensed model (item AMM1288) features newly tooled RS components. Under the hood is the detailed 350 with its bright air cleaner and legible stickers, while opening the trunk exposes the redline-tire-equipped spare wheel and jack. Flock carpet, fabric seat belts, and a console-shifted four-speed grace the interior, and the undercarriage looks true to life. Camaro fans will love the tribute to "This Exciting New Road Machine From Chevrolet."

THE GOODS

By Tom Comerro

*Prices shown are presumed accurate at the time of printing.
Please confirm with seller prior to purchase.

HELLEPHANT HIGHLIGHT

SPEED DAWG • 866-906-7801 • SPEEDDAWG.COM • $89.95

The Mopar Hellephant 426 Crate Racing Stripe Shift Knob is a new addition to the licensed Mopar series of knobs dedicated to the popular behemoth Hellcat engine. Measuring at a 2⅛-inch diameter, the shift knob is adorned with inlaid black racing stripes, a blue Mopar 426 Crate logo on top, and Hellephant logos on both sides. All graphics are subsurface, so there is no way to scrape or wear off the design. The polymer resin knobs are made to meet performance level torque and temperature requirements and they have a 16 mm x 1.50 solid brass insert that comes with a threaded brass adapter and jam nut in your choice of more than a dozen thread sizes. Each weighs about 5 ounces; optional 12-volt momentary switches are available for an additional cost. Look up p/n M502HLP-MBKMB-426CT for more information.

CAMARO AND NOVA CHASSIS REINFORCEMENT

SUMMIT RACING • 800-230-3030 • SUMMITRACING.COM
$625-$675 (CONNECTORS); $180 (BUSHING KIT)

Stiffen the chassis in your 1967-'69 Chevy Camaro or 1962-'74 Chevy II/Nova with these new bolt-on subframe connectors. The connectors can improve the handling and ride quality of these models and require only minimal installation effort. Each connector is made from 1.5 x 3-inch, .125-inch-wall steel and the front portion bolts through the original subframe while being held on by the body bushings to improve rigidity. The rear of the connectors features leaf-spring mounts that bolt to the floorpan's existing mount locations; hardware is included. Inquire about p/n ART-11257300. While you're at it, check out Ride Tech's Delrin/aluminum subframe bushing kit to reduce chassis flex. Ask about p/n ART-81001000 for more details.

DASHING GTO

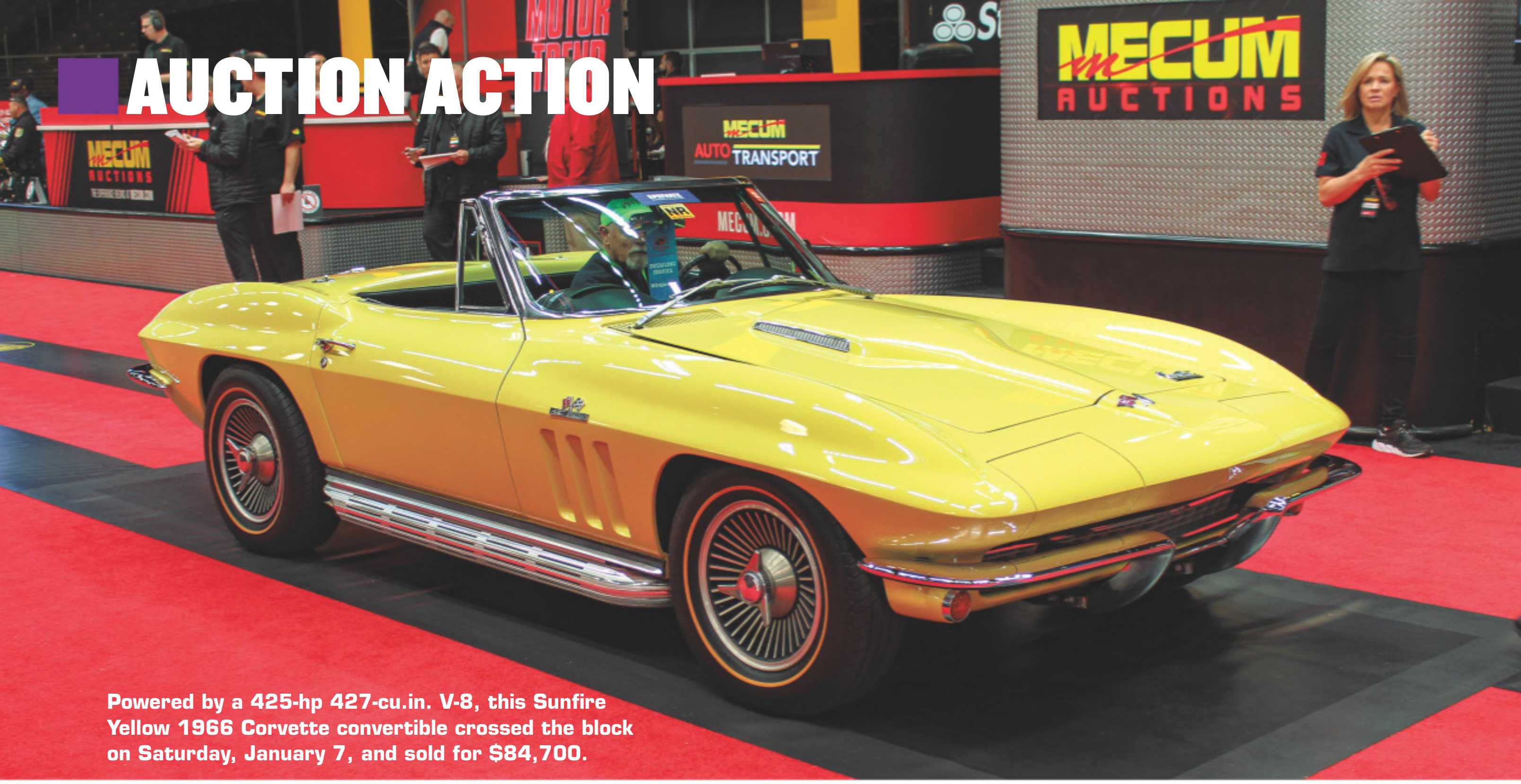
CLASSIC INSTRUMENTS • 844-342-8437
CLASSICINSTRUMENTS.COM • $1,104.00

Liven up the dash and gauges of your Pontiac GTO with these new OE-style direct-fit clusters. Each features a speedometer and tachometer with two dual gauges reading fuel/oil and temperature/volts behind flat glass lenses. They include green LED turn-signal indicators and a blue high-beam indicator in the dash housing. All mounting hardware and a wiring harness is included, compatible with your GTO's original bezel and diffuser, plus calibration is easy via push-button and built-in ECM signal filter switch. Other sending units are included, fuel gauges are calibrated to 0-90 ohm, and no external control boxes are needed. They're available in seven different design series; look up p/n PC64OE05 and PC66OE05 for more details.

CHEVY SMALL-BLOCK MANIFOLDS

HOLLEY • 866-464-6553 • HOLLEY.COM • $231.95-$416.95

Increase performance and bring a unique look to your Chevy's engine bay with these new exhaust manifolds from Hooker. A variety of designs are available for several different engine swap applications, and these manifolds also offer a cleaner appearance with modern features. They're made of silicon-molybdenum ductile iron that can handle high temperatures while providing resistance to rust and cracking. These manifolds achieve better airflow than the stock manifolds, as the new parts have a larger cross-sectional area and 2½-inch outlets to help improve performance. Designed for rectangular or D-port heads, they will work with standard straight-plug heads and Vortec straight-plug head designs, enabling use across many popular Chevy small-block applications. Choose between natural cast-iron or ceramic-coated finishes in silver, black, or titanium. Gaskets and hardware are also included. Ask about p/n 8525HKR (rectangular); 8527HKR (D-port).



Powered by a 425-hp 427-cu.in. V-8, this Sunfire Yellow 1966 Corvette convertible crossed the block on Saturday, January 7, and sold for $84,700.

MECUM AUCTIONS: KISSIMMEE 2023

ANNUAL FLORIDA EVENT RINGS IN WITH A RECORD $234 MILLION

WORDS AND PHOTOGRAPHY BY JIM BLACK

WISCONSIN-BASED MECUM Auctions continued its tradition of playing host to the first sale of the auction season with its Kissimmee extravaganza, running from January 4-15 at the Osceola Heritage Park. The Florida-based annual opener boasted a catalog of 4,000 vehicle lots scheduled to cross the block at the 200-acre complex, which included hundreds of contemporary and ’60s-era muscle cars, high-performance customs, and one-off restomods.

It quickly became clear the Kissimmee event was back in full swing thanks to noticeably increased bidder action and spectator enthusiasm. Leading the sales race was a 1992 Ferrari F40, number 179 of 213 built for the U.S. market, which showed just 10,994 miles; it commanded $3.14 million. Not far behind in second spot was a 1967 Ferrari 275 GTB/4 that realized $2.97 million. Additional top ten sellers included five exotic imports and four American muscle cars, the latter being two 1969 Dodge Charger Daytonas, both factory Hemi cars, that achieved $1.43 million each; a 1966 Shelby 427 Cobra that sold for $1.43 million; and a 1970 Pontiac GTO Judge Ram Air IV convertible that brought $1.1 million—an auction record for *any* Pontiac GTO.

Intermediate muscle cars aside, the Kissimmee sale also offered an extensive array of America’s sports car. Topping the long list of Corvettes were a 1967 L68 coupe that sold for $495,000, and a 1963 L84 convertible that realized $467,500. A 1967 L71 427 convertible sold for $440,000.

If there were hushed whispers about the changing economy affecting the Kissimmee sale, Mecum brushed them aside by setting a new event record with a grand total of $234 million, making this the second consecutive year the Florida sale eclipsed $200 million. For a complete list of results from the Kissimmee sale, and an up-to-date 2023 Mecum event calendar, visit mecum.com.

THE NUMBERS

Total Sales: $234 million

Top Muscle Car Sale: A pair of 1969 Dodge Hemi Daytonas and a 1966 Shelby 427 Cobra; $1,430,000 in a three-way tie.

UPCOMING AUCTIONS

April 13-15, 2023 – Houston, Texas
May 12-20, 2023 – Indianapolis, Indiana
June 8-10, 2023 – Tulsa, Oklahoma

262-275-5050 • mecum.com

LEGEND

Condition: #1 = Excellent; #2 = Very Good; #3 = Average; #4 = Poor; #5 = Major Project

Reserve: Minimum price owner will accept

High Bid: The highest offer made (but vehicle did not sell) *

Selling Price: What the vehicle sold for *

Average Market Range: Values based on current market trends for vehicles in #2- to #1 condition, respectively

*All prices shown include the buyer’s premium on sold lots. Unsold lots include only the highest bid, when available.

1971 DODGE

MODEL: Charger Super Bee
CONDITION: Restored
RESERVE: Undisclosed
HIGH BID: $190,000 (not sold)
AVG. MARKET RANGE:
$138,500 - $199,000

Touted as one of nine factory four-speed 1971 Hemi Super Bees built, this Dodge was sold new at Grand Spaulding Dodge. It was said to be fully documented, and one of the most heavily optioned Hemi Super Bees known. The EV2 Hemi Orange Charger's options included the A34 Super Track Pak, power front disc brakes, Ramcharger hood and hood pins, Hurst Pistol-Grip shifter, color-keyed racing mirrors, front and rear spoilers, AM/FM radio, and Rallye wheels shod with Goodyear G60-15 Polyglas GT tires. This car was previously part of the Motor City Muscle Collection. Despite receiving much attention, the Hemi-powered Mopar fell short on the block and left Kissimmee unsold.

1970 FORD

MODEL: Mustang Boss 302
CONDITION: Restored
RESERVE: None
SELLING PRICE: $159,500
AVG. MARKET RANGE:
$125,000 - $175,000

The Boss 302 Mustang, built to meet homologation requirements for SCCA Trans-Am competition, became a tour de force overnight. Of the 7,014 Boss 302s built for 1970, records show this one was delivered new to TD & PA Peffley Inc. in Dayton, Ohio, fitted with options that included rear window sport slats, pedestal rear spoiler, functional Shaker hood scoop, chrome Magnum 500 wheels, an in-dash tach, and 3.91 Traction-Lok diff. Plus, it was painted Grabber Orange, making the Mustang a one-of-one example when matched with its other specs. The potent numbers-matching pony had been given a comprehensive restoration that still stunned enough to garner a $159,500 sale price.

1971 PLYMOUTH

MODEL: 'Cuda
CONDITION: Restored
RESERVE: Undisclosed
HIGH BID: $160,000 (not sold)
AVG. MARKET RANGE:
$250,000 - $275,000

Chrysler's High Impact colors still make quite an impression, as evidenced by this 1971 'Cuda convertible painted Curious Yellow with in-your-face black billboard graphics and a white interior, all verified by the car's original broadcast sheet and fender tag. A recent rotisserie nut-and-bolt restoration to OE specifications confirmed the car's matching-numbers 340-cu.in. engine and A727 automatic transmission had remained with the muscular Mopar. Options here included power steering and windows, air conditioning, hood tie-downs, and Rallye wheels. This second year E-body 'Cuda had everything a potential buyer would have wanted, but unfortunately bidding stalled below the seller's expectations.

2005 FORD

MODEL: GT
CONDITION: Original
RESERVE: None
SELLING PRICE: $429,000
AVG. MARKET RANGE:
$450,000 - $550,000

Featuring styling inspired by the GT40s that won the punishing 24 Hours of Le Mans from 1966 through 1969, this 2005 Ford GT — one of a reported 2,022 built during the year — came equipped with a supercharged 550-hp 5.4-liter V-8 engine, six-speed manual transmission, McIntosh AM/FM stereo, and alloy wheels with Goodyear Eagle F1 tires. Also included in the sale were a copy of the original title, window sticker, Ford factory paperwork and letters, and all paperwork from original selling dealer, Don Davis Ford. Like other first-gen GTs that have hit the market in recent years, this one boasted low mileage to the tune of just 1,507 clicks on the odometer and it sold just below the current market range.

1967 PLYMOUTH

MODEL: GTX
CONDITION: Restored
RESERVE: None
SELLING PRICE: $143,000
AVG. MARKET RANGE:
$125,000 - $150,000

Despite having offered a performance punch since the mid-Fifties, Plymouth was late to the table with a "packaged" muscle car. That changed with the Belvedere-based GTX in 1967, offered as a two-door hardtop or convertible with a standard 375-hp 440 "Super Commando" V-8. The only engine option was the 426 Street Hemi, which could have been paired with a four-speed manual, as depicted by this hardtop. Options here included power steering and brakes, and more. The placard didn't indicate if the drivetrain was a matching-numbers powerteam; what seemed more evident was the top-notch restoration the GTX received that helped it garner a sale price near the top end of the market range.

1969 AMC

MODEL: AMX-500 California Special
CONDITION: Restored
RESERVE: Undisclosed
SELLING PRICE: $67,100
AVG. MARKET RANGE:
$54,000 - $70,000

Never heard of an AMX-500 California Special? No surprise. They're exceedingly rare, initially created and sold, "exclusively by members of the Southern California American Motors Dealer Association to commemorate the 1969 season at Riverside International Raceway." Of the reported 283 AMXs painted Big Bad Green (as this 390-powered/automatic unit), roughly 23 received black stripes and a tan interior — a color combo that matched the track's pace car — along with the all-important "500 Special" badges. Known as "AMX #14923," this one also sported several coveted options. These are so rare, value guides don't offer a percentage bump. Either way, both buyer and seller were happy with the sale price.

1967 CHEVROLET

MODEL: Corvette
CONDITION: Restored
RESERVE: Undisclosed
HIGH BID: $160,000 (not sold)
AVG. MARKET RANGE: $90,000 - $108,000

Bloomington Gold- and NCRS-certified Corvettes have once again become a hot commodity on the auction block. This one, a matching-numbers 1967 coupe, had been fitted at the factory with a (L68-code) 400-hp, 427-cu.in. engine (that's three carbs and a hydraulic camshaft), one of 2,101 Corvettes built with that V-8. This one also touted a Muncie four-speed, side exhausts, power steering, Saddle Tan leather seats, AM/FM radio, and a sport steering wheel, all wrapped in a fiberglass shell painted Marlboro Maroon with a black hood stinger. Included with the sale was part of the Chevy's original tank sticker. Although this exceptionally restored Corvette witnessed a lot of bidder action, it failed to meet the seller's reserve.

1965 SHELBY

MODEL: 427 Cobra
CONDITION: Restored
RESERVE: Undisclosed
SELLING PRICE: $660,000
AVG. MARKET RANGE: $1,750,000 - $2,000,000

Having history doesn't necessarily add value. Take CSX 3063 for example. Records state that the chassis was built to racing specs, after which Shelby American shipped it to Ghia in Italy, which then, "removed the unneeded substructure and installed a body on the chassis as a styling exercise." After that, the Cobra was "built out into a 427 Cobra Roadster," and then crashed, seriously enough to make someone cut it in half! From there, several owners followed, the chassis was repaired, the rest was restored, it was displayed at SAAC 20, and repainted Viking Blue thereafter. The soft price was likely a reflection of the car's significant alterations over the course of its existence.

1968 OLDSMOBILE

MODEL: 4-4-2 W-30
CONDITION: Restored
RESERVE: Undisclosed
SELLING PRICE: $101,200
AVG. MARKET RANGE: $110,000 - $130,000

Oldsmobile 4-4-2s remain strong sellers at auction, having long since shed their "affordable muscle" status. The sale of this Scarlet Red example from 1968 demonstrates the point. It was one of 1,111 produced with the W-30 package during the year and noted specialist/restorer Steve Minore — who managed the resurrection here — confirmed that the matching-numbers drivetrain remained in place. The 400-cu.in. engine was factory-paired with a four-speed manual, as well as the G80 limited-slip 3.91:1 rear axle, upping its appeal among gearheads. If that wasn't enough, bucket seats, a center console, AM/FM stereo completed the package.

1966 PONTIAC

MODEL: GTO
CONDITION: Restored
RESERVE: Undisclosed
SELLING PRICE: $75,900
AVG. MARKET RANGE: $80,000 - $100,000

First-gen Pontiac GTO values have held steady for decades at this point, though it's easy to understand why. This Montero Red convertible from 1966 sported a white top and red interior and featured a 335-hp version of the 389 V-8, backed by a Hurst-shifted four-speed manual linked to a Safe-T-Track differential. Other goodies included bucket seats and console, Rally gauge cluster with tach, power steering, and Hurst wheels, while a complete Tri-Power setup was stashed in the trunk. It was bolstered by PHS documents and was one of 12,798 convertibles built in 1966 — the GTO's best-selling model year. This example received a quality, though undated, restoration, and it was stunning in every detail.

1968 CHEVROLET

MODEL: Camaro Z/28
CONDITION: Original
RESERVE: None
SELLING PRICE: $80,300
AVG. MARKET RANGE: $75,000 - $95,000

It's not often you find any muscle-era car in an incredibly preserved and seemingly original condition, like this 1968 Camaro Z/28. At the time of its cataloging, the odometer was showing just 43,439 miles managed by its numbers-matching 302-cu.in. engine, naturally paired with a four-speed manual. Despite power steering and brakes being optioned, it was built to go fast: The Posi axle contained a 4.56:1 gearset. According to the original sales invoice and window sticker, the Camaro was factory built with a gold interior; however, the dealership swapped it out for black accoutrements prior to delivery to its first owner. Therefore, it's easy to understand why this outstanding example landed well within the market range.

1970 BUICK

MODEL: GS Stage I
CONDITION: Restored
RESERVE: Undisclosed
SELLING PRICE: $209,000
AVG. MARKET RANGE: $120,000 - $150,000

Just like that, Buick's 1970 GS Stage I has likely taken a giant leap forward in value thanks to the market-busting sale price of this Glacier White hardtop. It was one of 664 GS Stage I units equipped with a four-speed manual, and thanks to a host of documents and a comprehensive restoration, it was confirmed the Buick had retained its numbers-matching drivetrain. There was a ton to like about this torque monster from Flint, such as the 3.64:1 Positive Traction differential, bucket seats, and Concours Gold accolades bestowed upon the hardtop at the 2010 Buick Nationals. This was a jaw-dropping result.

Hemmings AUCTIONS

Inventory Updated Daily at **hmn.com/auctions**

Sold thru
MAKE OFFER

1964 Ford Fairlane 500 Thunderbolt
Sold for **$200,004**

1972 Buick GS 455 Stage 1 Convertible
Sold for **$94,500**

Sold thru
MAKE OFFER

1969 Ford Mustang SportsRoof Restomod
Sold for **$72,975**

Sold thru
MAKE OFFER

1960 Chevrolet Corvette
Sold for **$78,750**

Sold thru
MAKE OFFER

1999 Shelby Series 1
Sold for **$120,000**

Sold thru
MAKE OFFER

1967 Plymouth Belvedere II
Sold for **$73,500**

Sold thru
MAKE OFFER

1970 Plymouth 'Cuda Hemi 426
Sold for **$215,000**

AUCTION NEWS

By Tom Comerro

RM SOTHEBY'S

RM SOTHEBY'S ARIZONA

Total sales of more than $44.8 million were achieved at the RM Sotheby's Arizona auction, with an impressive sell-through of 91 percent. Among the vehicles that changed hands was what is thought to be the most valuable C3 Corvette ever sold: a 1969 Stingray ZL-1 convertible, one of just two factory ZL-1 Corvettes ever made. The fully-documented Corvette was a frequent participant in racing competitions from 1969 to 1972 until it blew its original short-block assembly, which was replaced by an early, factory-correct, date-coded all-aluminum engine. After several years of hibernation, it was back to competition and car shows in 1991 until the original owner sold it to the consignor in 2007. The new owner gave it an extensive and proper restoration, including a factory-correct Monaco Orange paint refinish and black vinyl interior, before it was entered into the 2014 Bloomington Gold show where it was authenticated as the first of the two ZL-1 Corvettes built. From there it made its rounds at Radnor, Glenmoor, Pinehurst, and other special exhibits around the country, including the Simeone Foundation Automotive Museum, before it crossed the block at RM and sold for a whopping $3.14 million.

Also selling was a 1968 Shelby G.T. 500 KR fastback thought to be one of only 356 made, finished in Highland Green over black vinyl. Powered with 1968's new 428 Cobra Jet V-8 paired with an automatic transmission, it had a full swath of period performance and luxury options including shoulder harnesses, tilt-away steering wheel, AM radio, power steering and disc brakes, and a 3.50:1 Traction-Lok rear axle. The interior touches were correct down to the black knit-vinyl bucket seats and the wood grip on the shift lever with the Shelby Cobra snake logo. It came with the Deluxe Marti Report and it was listed in the Shelby American Automobile Club registry. When the bidding ended, the Shelby changed hands for $162,400. Full results from RM Sotheby's Arizona auction are now available at rmsothebys.com.

MAY EVENTS

5-6	**Mid-Ohio Mopars Swap Meet & Car Corral** Wooster, Ohio • 330-464-6612
5-7	**AACA Swap Meet** Lawrence, Kansas • 785-843-2222
5-7	**Rhinebeck Car Show & Swap Meet** Rhinebeck, New York • 845-876-4000
10-12	**Chickasha Swap Meet** Chickasha, Oklahoma • 405-224-6552
12-20	**Mecum Auction** Indianapolis, Indiana • 262-275-5050
14	**Long Beach Hi-Performance Swap Meet** Long Beach, California • 800-762-9785
19-20	**Motorsport Auction Group** Salem, Oregon • 888-330-0749
21	**Yankee POCI Dustoff** Hudson, Massachusetts • 978-293-3518
21	**Vettester Corvette Show** Wood Dale, Illinois • 224-587-6803
28	**Spring Into Summer Car Show** Bristol, Pennsylvania • 215-752-0484
28	**Pacific Northwest Mustang Show** Kennewick, Washington • 509-628-0556
28	**Indianapolis 500** Indianapolis, Indiana • 317-492-6700

Please note that these events are active as of press time.
We recommend you verify the status before making plans to attend.

BONHAMS

BONHAMS IN SCOTTSDALE

After the final gavel dropped at the Bonhams Scottsdale Auction, more than $30 million in total sales were realized with the American muscle cars being led by a 1971 Plymouth Hemi 'Cuda hardtop. Equipped with the vaunted Hemi engine mated to a four-speed transmission with Pistol-Grip shifter, the Plymouth was originally shipped to Europe and is thought to possibly be the only factory-exported '71 Hemi 'Cuda. The car was sent to Denmark, and seems to be one of the later 1971 cars built as it features some 1972 features, including the cowl sheetmetal, front seats, and four-bow headliner. After it spent time tearing up the tracks in northern Europe—Scandinavia, in particular—it was retired from racing and returned stateside. It underwent a thorough six-year restoration completed in 2008 and everything was restored back to factory specifications. With only 300 miles on the odometer after the restoration, the unique Hemi 'Cuda sold for $417,500. Visit bonhams.com for the entire list of results from the Bonhams Scottsdale Auction.

MAG RESULTS

The Motorsport Auction Group (MAG) announced its auction results from Fort McDowell, Arizona, with several muscle cars crossing the block. Among the American muscle was this 1971 Chevrolet Camaro Z28, which featured a date-code correct 350-cu.in./330-hp LT-1 engine with a correct M21 four-speed transmission. It was finished in Rosewood Metallic paint and had a Sandalwood interior. Other features included the correct 10-bolt 3.73 Posi rear end, factory AM/FM radio, front and rear spoiler package, as well as power steering and front disc brakes. When the bidding ended, it rolled off the block for $60,480. Full results from the auction are now available; visit motorsportauctiongroup.com for more details.

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1972 CHEVROLET CORVETTE

RESERVE: $42,000
SELLING PRICE: $45,150

RECENT MARKET RANGE:
$42,210-$61,350

As the Hemmings Auctions listing pointed out, this LT-1 V-8-powered Corvette was one of only 240 built for 1972 with air conditioning, adding both to its collectability and occupant comfort. The eye-catching War Bonnet Yellow finish was an older repaint with "minor imperfections," and the T-top seals showed their age, but the Saddle leather interior looked very welcoming. That numbers-matching solid-lifter 350-cu.in. engine imbibed through an aftermarket carburetor but operated without issue, as did the four-speed manual transmission. The suspension, brakes, and undercarriage all appeared clean and serviceable. A copy of the original tank sticker added to this desirable 'Vette's provenance.

1966 PONTIAC GTO

RESERVE: $47,000
SELLING PRICE: $53,550

RECENT MARKET RANGE:
$54,110-$75,550

The GTO was arguably at its stylistic zenith in 1966 when this convertible was built. It's stood the test of time, and this example has been reborn as a restomod with a Tri-Power-topped, overbored 455-cu.in. V-8 under the scooped hood and a console-mounted four-speed between bucket seats. The custom red paint was called an "8" on a scale of 10; the white vinyl top was recently fitted; and the Parchment vinyl-upholstered interior sported a wood-rim wheel, vintage-look modern stereo, and accessory gauges. Cragar mags added a period touch. The seller promised this Pontiac was rust-free, and it was said to be a fine-driving head-turner. Three videos and ample photos helped the GTO sell as a relative bargain.

1969 PLYMOUTH ROAD RUNNER

RESERVE: $65,000
SELLING PRICE: $105,000

RECENT MARKET RANGE:
$60,110-$79,550

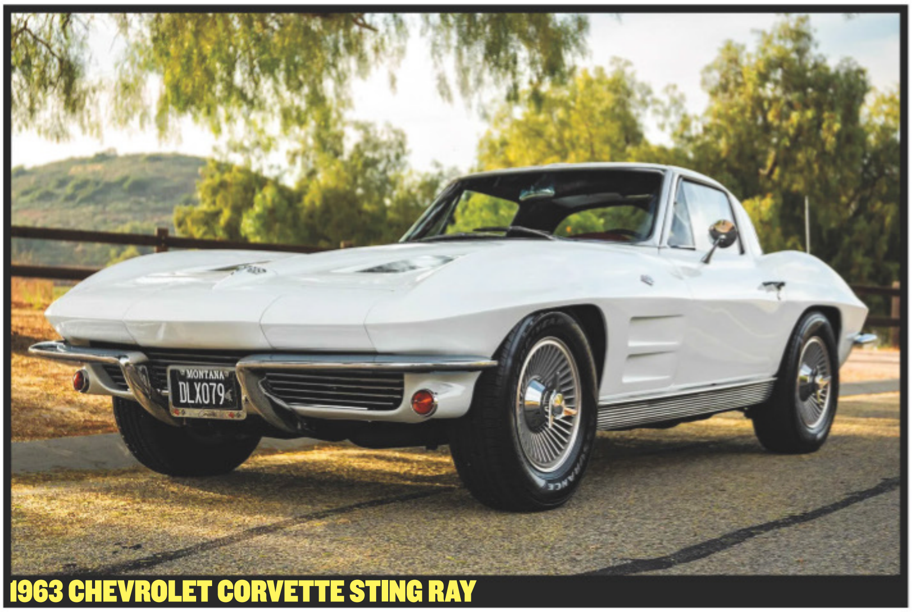
Some might consider this 23,017-mile Road Runner hardtop the holy grail of B-body muscle Plymouths, thanks to the factory-installed 426-cu.in. "Coyote Duster" V-8 and four-speed manual gearbox under its sheetmetal. Wearing a 1980s respray of the factory Frost Green, this Hemi-powered car presented honestly with some chips and bubbles in the finish and surface rust on the trunk floor. The bucket seat/console-equipped interior looked good, although a loose headliner, cracked steering wheel, and malfunctioning tach were divulged. The driveline leaked but everything worked; the tires were more than 30 years old and needed replacing. Unsurprisingly, this car's selling price exceeded its reserve.

LEGEND

RESERVE: Minimum price owner will accept

SELLING PRICE*: What the vehicle sold for, inclusive of buyer's 5-percent fee (*sold as a Make Offer listing following the live auction)

RECENT MARKET RANGE: The low-to-high value range for the vehicle based on published results of similar vehicles sold at auction over the previous 18 months



1963 CHEVROLET CORVETTE STING RAY

RESERVE: $120,000
SELLING PRICE: $126,000

RECENT MARKET RANGE:
$115,130-$142,450

The split-window Corvette is an icon among icons, and this attractively presented '63 was restored to a high standard. The white paint had a few chips on the nose, but otherwise appeared glossy and crisp, complementing the bright-red vinyl interior with its Bluetooth-capable radio. It's believed the coupe's four-barrel 327-cu.in. V-8 was factory installed, but it was restamped when it was rebuilt with high-performance components. The four-speed manual and Positraction axle were claimed to be original and fault-free. Also recently serviced was the suspension, which was said to operate well along with the four-wheel drum brakes. It took an impressive 24 bids to find this 'Vette a new home.

2013 CADILLAC CTS-V

RESERVE: $25,000
SELLING PRICE: $32,550*

RECENT MARKET RANGE:
$23,110-$34,350

The combination of two doors and three pedals made the second-generation CTS-V a bona fide collectible right out of the showroom. This example, which sold as a Make Offer listing, was a two-owner car with little over 98,000 miles on the odometer. Its supercharged 556-hp 6.2-liter V-8 was driven moderately, the seller promised. The limited-slip differential was rebuilt and suspension control arms replaced. It was divulged that areas of the body were repainted due to hail damage, but minor blemishes remained. The leather/Alcantara upholstery showed some bolster wear on the driver's seat, and the driver's floormat was likewise affected. If carefully kept, the Cadillac will likely appreciate.

2016 DODGE CHALLENGER R/T

RESERVE: $39,750
SELLING PRICE: $39,900*

RECENT MARKET RANGE:
$37,110-$49,450

The window sticker for this one-owner, never-modified, 1,280-mile Challenger Scat Pack listed its MSRP as $46,810 in 2016, and that made its Make Offer selling price a real bargain. Considering its level of equipment and (heretofore untapped) performance, the car's new owner has much driving enjoyment to make up for. Its 485-hp "392" V-8 and eight-speed TorqueFlite automatic were said to be as-new with no leaks, and the undercarriage, suspension, and brakes were all clean and dry. This R/T's TorRed paint admittedly had one touched-up rock chip, but was otherwise flawless, and the black leather and suede seating and matching carpeting showed no wear. Its winning bidder hit the Hemi-powered jackpot.

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JIM McGOWAN
jmcgowan@hemmings.com

Jim was traveling this month, so here's one of our favorites from the archives.

What's in Your Toolbox?

Ever since the first humanoid, still wet behind the ears with primordial ooze, realized he needed something to cut, scrape, stab, or whatever, tools have been around. From rock to bronze to steel, a tool is a tool, and we still need 'em today—perhaps more than ever. Plus, for a car person, tools are like jewelry—that's why we keep them in a box.

Tools develop in lockstep with social and mechanical evolution. As new products are released to the market, new tools are required to fix them. It's a natural progression. Wagons evolved into the automobile, and wagon tools worked nicely to repair them both at first. As the automobile became more sophisticated, more sophisticated tools were invented. It's sort of like Thomas Edison's approach: After he invented the light bulb, he assisted in founding a whole industry that manufactured tools and appliances that required electricity in the house. Self-sustaining genius.

Today's tool imagineers never cease to amaze me. This is the age of enlightenment when it comes to tool technology: It seems we can't ever have enough. I don't need high-buck stuff; I've survived nicely for many years using regular-guy tools. My father used regular-guy tools also, and I inherited a lot of miscellaneous old tools from him: Lots of wrenches and sockets with names of companies no longer on the planet. Surprisingly, I have found a use for almost all of these antiques at one time or another over the last 40-plus years. Old tools are as good as new tools, as long as they do the job.

I have a friend who really loves old tools, and he hits garage sales and swap meets every weekend looking for them. He has a collection of musty-smelling wood and metal boxes used by long-gone mechanics, and fills them with rusty, well-used tools. He tells me that these strong "senior" tools are made from "real American" steel—not the breakable stuff available today. He must know what he's talking about, as I have broken several modern tools working on my cars; my old stuff is almost indestructible.

In the old days, we would take a perfectly good tool—say, an open-end wrench—and modify it to do what we needed. Grind it, cut it, heat and bend it—we didn't care. I still have a couple of ground-down open-ends that wouldn't fit where required and needed massaging to get the job done—header bolts come to mind.

Today's combination tools are really handy. I spotted several of these wrenches during my last search. Open-end and ratchet combo, ratchet at both ends, both with straight or curved handles. I bought a set of the curved handles with different size ratchets on each end. I also found a set of bolt extractors. We've all run afoul of the dreaded "rounded off" bolt head during the removal process. Drilling or using an "easy-out" was usually the only solution. Now they have a set of handy sockets that lock on the rounded head, dig into the metal, and grip firmly enough to remove the bolt.

Another tool I really like is a long-handle ratchet with moveable head. You can get at all kinds of angles in all kinds of places with this tool and have some purchase because of the length of the handle.

Our accumulation of tools resulted in the invention of something to carry them in: toolboxes. Naturally, toolboxes had to evolve just like the tools in them, passing from wood to metal to huge roll-around megaliths with a hundred drawers and brand-name logos. Some of these high-rise tool sheds really need an engine and steering wheel—they cost as much as a small car!

This leads to another facet of tools: tool snobs. These are the folks who have to keep up with the latest, hottest, chrome-iest, weirdest tools on the market for bragging rights, even if they never use them. Today's toolmakers have capitalized on this by marketing a professional quality or mechanics-only line with special logos and ID for this type of consumer. When you look at the hands on these guys, something is usually missing: scars! Personally, I kinda prefer a collection of scars, a little rust, and a lifetime guarantee.

That type of monster roll-around box has also become a status symbol with the tool snob community. These things would take up a major chunk of space in a normal tool-guy's garage. I'd rather fill the space with a car than a show-quality toolbox. My little top and bottom roller works just fine, and tucks into a corner when I don't need it.

Tools are the stuff that makes working on our cars possible, and enjoyable, provided you have the right tool for the job. Lately, I've been picking up some old garage-sale/swap-meet discards myself. I often wonder who used these relics, and when. Then I wonder if someday all the stuff in my toolbox will wind up on somebody else's driveway, considered by the seller too old to be of any use. Only people like us will really know the answer. ■

> "… I kinda prefer a collection of scars, a little rust, and a lifetime guarantee."

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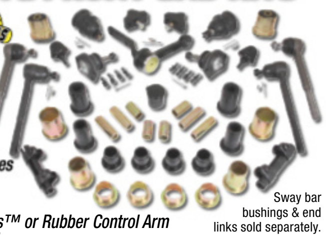

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